DOCUMENT RESUME

ED 038 519 VT 010 721

AUTHOR	Nelson, Helen Y.
TITLE	Review and Synthesis of Research on Home Economics Education.
INSTITUTION	Ohio State Univ., Columbus. Center for Vocational and Technical Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
PEPORT NO	RS-57
PUB DATE	Apr 70
NOTE	67p. Second Edition
AVAILABLE FROM	The Center for Vocational and Technical Education, Ohio State University, 1900 Kenny Road, Columbus, Ohio 43210 ($1.75)
EDRS PRICE	EDRS Price MF-$0.50 HC-$3.45
DESCRIPTORS	*Bibliographies, Cognitive Processes, Curriculum Development, Educational Needs, Educational Philosophy, *Educational Research, Effective Teaching, Employment Opportunities, *Home Economics Education, Instructional Materials, Program Administration, Program Evaluation, *Research Needs, *Research Reviews (Publications), Student Personnel Services, Supervision, Teacher Education, Teaching Methods

AESTRACT

The 102 reports of research in home economics education for the period 1965-1969 selected for review were obtained from colleges and universities, state research coordinating units, professional journals, and the ERIC Clearinghouse for Vocational and Technical Education. Reports selected were reviewed under the following categories: (1) Philosophy and Objectives, (2) Manpower Needs and Employment Opportunities, (3) Curriculum Development, (4) Educational Programs, (5) Instructional Materials and Devices, (6) Learning Process and Teaching Methods, (7) Student Personnel Services, (8) Facilities and Equipment, (9) Teacher Education, (10) Administration and Supervision, (11) Evaluation, and (12) Research. Research has improved since the 1965 review and sythesis, but there is a continuing need for carefully designed home economics research based on theoretically-derived hypotheses to fill research gaps. More long-range research programs focusing on significant problems and an increase in the amount of time devoted to research are needed. Materials prior to 1965 are reviewed in ED 011 563. (SB)

ED038519

Research Series No. 57
VT 010 721

review and synthesis of research on

Home Economics Education

second edition

ERIC CLEARINGHOUSE
ON VOCATIONAL AND TECHNICAL EDUCATION

VT 010 721

The Center for Vocational and Technical Education has been established as an independent unit on The Ohio State University campus with a grant from the Division of Comprehensive and Vocational Education Research, U.S. Office of Education. It serves a catalytic role in establishing consortia to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach, and interinstitutional in its program.

The major objectives of The Center follow:

1. To provide continuing reappraisal of the role and function of vocational and technical education in our democratic society;
2. To stimulate and strengthen state, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and technical education;
3. To encourage the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings;
4. To conduct the research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education;
5. To upgrade vocational education leadership (state supervisors, teacher educators, research specialists, and others) through an advanced study and in-service education program;
6. TO PROVIDE A NATIONAL INFORMATION RETRIEVAL, STORAGE, AND DISSEMINATION SYSTEM FOR VOCATIONAL AND TECHNICAL EDUCATION LINKED WITH THE EDUCATIONAL RESOURCES INFORMATION CENTER LOCATED IN THE U.S. OFFICE OF EDUCATION.

ED038519

Research Series No. 57
VT 010 721

REVIEW AND SYNTHESIS OF RESEARCH ON HOME ECONOMICS EDUCATION

Second Edition

Helen Y. Nelson
Associate Professor, Department of
Community Services Education
New York State College of Human Ecology
Cornell University
Ithaca, New York

April 1970

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

ERIC Clearinghouse on Vocational and Technical Education
The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road Columbus, Ohio 43210

The work presented or reported herein was performed pursuant to a Grant from the U.S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

PREFACE

This *Review and Synthesis of Research on Home Economics Education, Second Edition* is one of a second generation of papers which assess the "state of the art" in vocational and technical education fields. It should assist in identifying substantive problems and methodological approaches for researchers and curriculum development specialists, as well as providing practitioners with a summary of research findings which have application to educational programs. In the field of vocational and technical education, the pace of research and development activities has increased considerably during the period under review. Gaps which exist for some readers are probably the result of the author's prerogative to be selective.

As one of a series of information analysis papers released by the ERIC Clearinghouse on Vocational and Technical Education, this review is intended to provide researchers, curriculum development specialists, and practitioners with an authoritative analysis of the literature in the field. Those who wish to examine primary sources of information should utilize the bibliography. Where ERIC Document numbers and ERIC Document Reproduction Service prices are cited, the documents are available in microfiche and hard copy forms.

The profession is indebted to Helen Y. Nelson for her scholarship in the preparation of this report. Recognition is also due Margaret V. Barkley, Professor of Home Economics at Arizona State University, and Alberta D. Hill, Professor of Home Economics Education at Washington State University, for their critical review of the manuscript prior to its final revision and publication. Joel Magisos, information specialist at The Center, coordinated the publication's development.

Members of the profession are invited to offer suggestions for the improvement of the review and synthesis series and to suggest specific topics or problems for future reviews.

Robert E. Taylor
Director
The Center for Vocational and
Technical Education
ERIC Clearinghouse on Vocational
and Technical Education

INTRODUCTION

Written primarily for researchers and students in graduate programs, the intent of this effort is the analysis, summarization and synthesis of the significant research literature in home economics education for the period covered. It is seen as a systematic review and updating of the literature beyond the first generation of reviews to the present.

This volume covers the period between 1965 and the end of 1968; it also includes a few studies under a 1969 dateline that had long been in progress. Reports included are those relevant to home economics education in the junior and senior high schools, area vocational schools and continuing education programs. Reports of research in foreign countries were excluded. At the college level those studies were included which were concerned with teacher preparation programs in home economics education.

As careful a search as possible was made for appropriate materials and a very large number were reviewed; completeness of the collection, however, is not presumed. Studies examined for this report were obtained from colleges and universities, state research coordinating units, professional journals, and the ERIC Clearinghouse at The Center for Vocational and Technical Education.

Selectivity was urged for the review. The presence or absence of guiding hypotheses, documentation of the validity and reliability of measurement instruments, appropriateness of observation methods, quality of sampling design, the proportion of sample responding and appropriateness of methods of analysis were all scrutinized. Guidelines established for inclusion in the review favored consideration of those studies investigating significant problems which exhibited a testing of theoretically derived hypotheses, those which approached problems to be solved in an innovative way, those series of studies which illustrated a continuity of research and from which tended to emerge clearly conceptualized problems, and studies utilizing experimental or quasi-experimental designs. Negative or inconclusive results were not a barrier to inclusion in the review. Generally, studies based on the data from a single school or local district were excluded. Some studies not meeting the established criteria but tentatively exploring important areas in which research has been lacking were included.

The author is indebted to the many teacher educators who were so generous in sending her their personal copies of master's and doctor's theses.

Helen Y. Nelson

TABLE OF CONTENTS

PREFACE iii
INTRODUCTION v
PHILOSOPHY AND OBJECTIVES 3
MANPOWER NEEDS AND EMPLOYMENT OPPORTUNITIES 4
    Summary 5
CURRICULUM DEVELOPMENT 5
    Occupational Home Economics 6
    Development of Curriculum Materials 9
    Needs of Learners 11
    Factors Related to Curriculum Decisions 14
    Summary 16
EDUCATIONAL PROGRAMS 16
INSTRUCTIONAL MATERIALS AND DEVICES 17
    Summary 19
LEARNING PROCESS AND TEACHING METHODS 19
    Summary 22
STUDENT PERSONNEL SERVICES 22
    Characteristics of Students 22
    Wives Working in Gainful Employment 24
    Information Useful in Counseling for Occupational Home Economics 26
    Summary 27
FACILITIES AND EQUIPMENT 28
TEACHER EDUCATION 28
    Selection and Retention Procedures 28
    Beliefs and Practices of Teachers 29
    Prediction of Effectiveness 30
    Innovative Methods 31
    Staffing Home Economics Programs 34
    Personality Characteristics of Teachers 35
    Structure of Home Economics Education 37
    Summary 38
ADMINISTRATION AND SUPERVISION 38
    Summary 41
EVALUATION 42
    Program Evaluation 42
    Instrument Development 45
    Summary 47
RESEARCH 48
    Avenues to Improved Research 48
    Problem Areas 49
CONCLUSIONS AND RECOMMENDATIONS 51
BIBLIOGRAPHY 53

REVIEW AND SYNTHESIS OF RESEARCH ON HOME ECONOMICS EDUCATION

Second Edition

PHILOSOPHY AND OBJECTIVES

From the first definition of the field of home economics in the early 1900's, its central focus has been the well-being of individuals and families. In "Home Economics—New Directions," The American Home Economics Association outlined in 1959 its concerns for all aspects of family living. These included child development; nutritional needs; food selection and preparation; family relationships; textiles; the social and psychological significance of clothing and its design, selection, construction and care; housing for the family; consumption and other economic aspects; equipment and furnishings for the home; management in the use of resources; and art.

Home economics is a part of the secondary school curriculum in nearly all high schools in the United States. Its major purpose is preparation for homemaking. With the passage of the Vocational Education Act of 1963, home economics assumed also the responsibility for preparing students for gainful employment. The Vocational Education Amendments of 1968 reaffirmed the traditional purposes of home economics of improving home environments and the quality of family life. The provisions in the amendments for consumer and homemaking education placed stress on social and cultural conditions and emphasized the dual role of homemaker and wage earner.

In reviewing urgent social issues and problems, Egan (1969) pointed out several with special relevance for home and family life. The following social, economic and technical trends have an influence in determining the objectives to be attained by home economics education:

- *Changes in population* with the greatest expansion in numbers among the young and the old, and a growing proportion of nonwhites.
- *Threats to stability of family life,* in particular the increase of births out of wedlock and increase in numbers of households headed by women without husbands.
- *Increased mobility of population,* in particular the shift from rural to urban areas with concentration in the cities of problems related to health and welfare.
- *Working wives and mothers* with a doubling since 1950 of mothers in the labor force.
- *Continued existence of health problems,* among them a steady increase in venereal disease among teenagers, malnutrition, drug and narcotic abuse growing among teenagers.
- *Unmet educational needs* with considerable numbers of young people leaving school unprepared to find or hold jobs.

Researchers are being urged to provide findings on these high priority social issues.

No studies were found for the period covered which would most appropriately be placed under the heading of this section. Simpson (1968) has noted that one of the great needs of home economics education is research in its philosophical foundations to provide direction, rationale and justification for decision and action in its programs. She called for consideration of the following needs:

- Theoretical bases for curriculum decisions and sources of substantive directives for curriculum planning in home economics education
- Ethical criteria for the justification of specific curriculum content
- The validation of aims of various home economics programs and aspects of programs
- The role and value of intelligence in work and the purposes of work for the development of man and his social order
- The interrelationships of the family and other social institutions
- Logical bases for creative prediction and imaginative creation of vocations, including those related to home and family.

MANPOWER NEEDS AND EMPLOYMENT OPPORTUNITIES

Approximate guidelines for the home economics occupational programs of their states were sought by investigators in Florida, Oklahoma, and Connecticut. Two studies were concerned with secondary school home economics occupational training, one with developing curricula for post-secondary occupational programs. Although numerous small community or county level surveys have been made, none of these local surveys is presented here.

Ridley (1967) carried out a study for the State of Florida which identified occupations, job titles and job characteristics that require home economics knowledge and skills and estimated the annual entry opportunities. A sample of 10 percent of present and potential employers was drawn by systematic random sampling representing identified state geographic and population areas. Data gathered from 483 employers (83 percent of the sample) by means of interviews, indicated job opportunities for high school graduates without working experience, with "good" opportunities for advancement. Most employers had some form of on-the-job training. Most employers preferred men to women employees in clothing-textile services and housing-home furnishing services, but preferred women in child care and food services. Interviews with 305 homemakers as potential employers of women for homemaker services (97 percent of the sample), indicated that a need existed for trained persons in home service occupations.

In a study designed to gather information needed in order to develop occupational programs for Connecticut, Fetterman (1966) investigated employment opportunities for women in occupations related to home economics. She found nearly 8,000 such jobs on file in Connecticut employment offices. An inspection of seven of the labor market areas in that state showed close relationship between the number of job opportunities and the socioeconomic index scores. The higher the socioeconomic index average, in the seven labor market areas, the more openings existed in home economics-related occupations. She concluded that the large number of persons employed in home economics-related occupations and the employment outlook for such positions justified the introduction and development of programs to train for home economics-related occupations in Connecticut.

Need for the development of post-secondary occupationally-oriented curricula to prepare persons at the semi-professional level in home economics was surveyed for Oklahoma (Robinson, 1968). Managers of business establishments and supervisors of child care agencies (representing 92 establishments and agencies); administrators and instructors of home economics courses in junior colleges and area vocational schools (four institutions); and students enrolled in home economics courses in high schools, area vocational-technical centers and junior colleges (678) comprised a non-random sample selected to represent four areas of the state. Data gathering instruments based on items in devices previously developed for similar use were pretested on employers, junior college personnel, and high school students. All data were gathered by personal interview.

The majority of managers and school personnel believed there was a need for workers trained in occupational home economics at a semi-professional level. They indicated interest in working together to develop programs. School personnel would require and managers would permit students to observe and engage in work experiences as a part of training. Most considered it desirable that programs be planned to provide knowledge and training in several aspects of a home economics area with a time distribution of 25 percent for general education, and of the remainder, one-fourth theory and three-fourths skill development.

Summary

Three statewide studies indicated local opportunities for employment in jobs related to home economics for those with high school, and in one state, post-high school training. Findings are in line with larger manpower requirement surveys which show increasing numbers needed in service occupations at every level.

CURRICULUM DEVELOPMENT

More studies in the area of curriculum development were available for review than in any other aspect of home economics education. It is not surprising that, for the period 1965-1968, many of these investigations related to curriculum for occupational home economics and several are reported here. Other research studies reviewed were focused on development and use of curriculum materials. A few were selected whose findings furnished bases for curriculum decisions. Included also are studies of college teacher-preparation programs as they relate to curriculum in the secondary school.

Occupational Home Economics

Dewar (1966) collected data from the 50 chief state supervisors of home economics education for the 1965-66 school year on the number of secondary schools offering occupational courses in home economics, though at that time no figures were available on numbers of students enrolled. There were a total of 423 programs in 309 schools in 38 states being operated in 1965-66 or ready for introduction in 1966-67. Most of these were in cities with populations of 10,000 to 30,000; 23 programs were being carried on in nine cities with populations over 500,000. A little over a third of the programs were planned as a means of training students for occupations in food services. About a fifth were focused on occupations in the clothing area and nearly a fifth were designed to prepare child care workers. Teachers of the occupations programs were queried concerning problems they had encountered. Difficulties which at least half of the teachers had experienced included: locating out-of-school training stations and employers to cooperate in training; collection and/or preparation of teaching materials; conducting surveys of community job opportunities; organizing and using an advisory committee; evaluating the program.

Joern (1968) reported a national survey of wage earning home economics program development for which supervisors in 49 states and Puerto Rico furnished information. She noted an increase from 146 courses offered in 1964-65 to 1,292 courses in 1967-68. Most states had established educational programs in production and service aspects of food management, 47 states; the production and service aspects of clothing management were found in 42; child care and guidance, 39; institutional and home management and supporting services, 30. Dewar (1966) had also found more food service courses than any other type. Some states had begun programs in home furnishings, equipment and services, 13, and a few in health related occupations, 9. Nationally, the food service programs were by far the most developed, with on-the-job training provided in more programs than classroom-only experiences. Joern indicated that enrollment in occupational courses may comprise as much as 20 percent of the projected home economics enrollment of 2,100,000 students in 1975. Interesting to note here is Reed's (1968) findings from a survey of city supervisors in the United States. She found that activities concerned with wage earning received comparatively low ratings when respondents ranked them as items of importance with their other supervisory responsibilities.

Cozine (1968) directed a study designed to develop and test curriculum materials for three gainful-employment courses preparing for entry-level jobs in child care, clothing and food services, and to formulate recommendations for policies and procedures to follow in initiating and developing gainful employment programs in home economics. The three curriculum guides were produced and subjected to evaluations by students, parents, teachers and local administrators but the researchers considered themselves to have had only limited success on their objective of providing guidelines to policies and procedures for gainful employment programs. Among the policies they felt they had adequate evidence to support were: 1) advisory councils should be established for each training program with special attention to enlisting employers as council members; 2) the teacher should maintain close and continuing contact with employers willing to provide work experiences for students; 3) with changing competencies desired by employers, the teachers, as necessary, should evaluate and revise her employment courses. No specific recommendations were made for competencies and personal characteristics thought to be needed by a gainful employment teacher beyond noting that it would be desirable to have occupational experience in entry-level jobs and some training in guidance.

O'Donnell (1967) also offered guidelines for establishing occupational home economics programs after a review of the experiences of 10 Michigan communities with such programs. Stressed were: 1) need for administrative support; 2) ample lead-time for planning; 3) close cooperation with other vocational services; 4) use of advisory committees; 5) need to interpret programs to students, parents and faculty; and 6) the necessity of following up students and of continuous evaluation of the program.

Home economics occupations were among those included in an experiment with team teaching and flexible scheduling. (Robinson and Agan, 1966; Agan, 1967). Content common to all vocational curriculums was identified, embodied in a course, and team taught by several vocational education teachers to eleventh and twelfth grade students in a rural area. The course was well accepted in school and community though teachers had difficulties with scheduling time for planning. A major conclusion of the study was the importance of involving all vocational teachers in the team teaching. Also emphasized by those reporting on the experiment was the need to have students enrolled in one or more specialized occupational classes along with the "commonalities" course in order to permit some concentration in their primary area of occupational interest.

Guided by the assumption that it is better for students to acquire the knowledge and skills for a cluster of jobs than for just a specified job, several researchers devoted their efforts to identifying tasks performed by employees in occupations related to home economics and identifying clusters of jobs and competencies needed in the performance of the job clusters. Such studies as those carried out by Beaver (1967), Shipley (1967) and Carpenter (1968) should assist in the development of home economics occupations courses for secondary school students and adults.

As part of a larger study, Beaver (1967) clustered occupations and job titles needing common technical home economics training and identified competencies needed in each cluster of occupations (see Ridley, 1967, reviewed in Manpower section). The Ridley statewide random sample of employers furnished data to obtain identification of job titles and characteristics and qualifications needed by workers for each. Employers indicated for each competency whether it was needed or unnecessary. If needed they indicated whether it was at a level of awareness, performance, or technical understanding and whether it was desirable or essential at the level needed. Four large clusters were identified (i.e., child care, food, housing and home furnishings, clothing and textiles). Competencies were identified and analyzed for each cluster. In addition to job knowledge and skill proficiency, personal characteristics such as assumption of responsibility, execution of instructions, and the ability to work well with others were indicated by employers as essential.

Shipley (1967) personally administered a questionnaire and a checklist which had been developed through interviews and observations to collect data that would: 1) identify tasks performed by persons employed as, a) homemaker/home health aide, b) hotel/motel housekeeping aide, and c) nursing home housekeeping aide; 2) determine frequency of tasks performed by the worker; and 3) determine those tasks common to the three occupations and those unique. Homemaker service centers, nursing homes, motels and hotels in six Iowa communities were listed and a random selection made. From these employment situations 29 homemaker/home health aides were randomly selected as subjects. Managers chose 26 motel/hotel aides and 32 nursing home housekeeping aides as subjects. Personal data on subjects indicated that the three occupations were dominated by women 36 years of age and over, either married or previously married, and many working part time. Only the homemaker/home health aides had participated in training programs to prepare them for their occupation. Shipley examined mean scores for each task within an occupation derived from the employee check list to determine tasks common and unique. A correlation matrix provided data to determine clusters of related tasks within the three occupations. A core of 11 tasks predominantly related to household maintenance was found to be common. Homemaker/health aides had the largest number of unique tasks. For them six clusters of tasks were identified: 1) food production, 2) child care, 3) general household tasks, 4) household maintenance, 5) care of ill and disabled adults, and 6) safety. Tasks most frequently being performed by homemaker/home health aide were those related to food production; those performed most frequently by hotel/motel and nursing home housekeeping aides were household maintenance tasks.

Following the Shipley analysis of tasks, Carpenter (1968) identified competencies needed for those tasks and clusters of tasks found to be common to the three home related occupations studied. She then identified competencies common to the tasks, distinguished between needed competencies important and not important for entry into the occupations, and determined clusters of similar competencies. Information for these occupations was provided by managers of homemaker service centers, nursing homes and motels in six Iowa cities; the total population of homemaker/health aide directors (28); a random sample of 25 directors of hotel/motel aides; and a random sample of 27 nursing home housekeeping aides. For the common tasks and clusters identified by Shipley, Carpenter developed a check list of competencies needed by drawing on curriculum guides, textbooks and current periodicals with provision for responding in regard to need for competency and when it should be gained.

Frequency count and mean scores were determined for each item; all items having an expected frequency of five or more in each cell were tested by chi-square. A core of 56 competencies was found to be common to the three occupations; an additional 40 were found to be common to motel/hotel housekeeping and nursing home housekeeping occupations. All but one item of the common competencies could be classified into the following four clusters: 1) safety, 2) sanitation, 3) household maintenance, and 4) care and operation of equipment. Most of the competencies found to be unique to a single occupation were those needed by homemaker/home health aides.

Homemaker/home health aide directors felt it was needed or desirable that the majority of common competencies be gained before entry into work. Nursing home and motel/hotel managers were more willing to have their aides gain many of the competencies after they entered the occupations.

Problems encountered by coordinators and teachers in implementing programs of home economics occupational education were pointed out by several investigators. Teachers found it difficult to teach food service job clusters with insufficient institution type equipment, and scheduling class or individual use of school cafeteria equipment was a problem (Nelson and Jacoby, 1967; 1968). Dewar (1966) and Cozine (1968) identified the locating of training stations for occupational students as a difficulty. O'Donnell (1967) and Cozine (1968) noted the importance of using advisory councils for occupational programs. Teachers surveyed by Dewar (1966) indicated that setting up and using advisory committees was hard to manage.

Development of Curriculum Materials

Simpson (1966) and her co-workers produced a classification of educational objectives, psychomotor domain, in taxonomic form. It should be useful in the development of curriculum materials, as a research tool and as a basis for evaluation of educational outcomes in home economics, as well as such areas of specialization as industrial education, agriculture, music, art, and physical education. In addition to studies testing the hypothesis of cumulativeness, Simpson suggested the need for looking critically at the relationship among the three domains—cognitive, affective, psychomotor.

Hughes (1968) took a look at the relationship between the affective and cognitive domains in a study which proposed to examine the hierarchical order of behaviors postulated in those domains. This is discussed in the section on "Learning Processes." Exploratory analyses of data by means of multiple regression and by factor analysis revealed no pattern or relationships which would permit analysis beyond that of simple correlation. The relationship between student achievement on taxonomy-placed cognitive test items and responses to taxonomy-placed attitudinal items on the topic studied expressed by a correlation of +.24 can best be described as low, positive, and significant statistically. Student responses to interview questions indicated that they would work for marks irrespective of their liking for a subject. This suggests that in assessing affect in school subjects one must recognize that extrinsic factors may be of greater importance than intrinsic interest in or commitment to a given topic of study.

What began as provision of a controlled learning situation to test the cumulative hypothesis of the Taxonomy of Educational Objectives in the Hughes study resulted in the production and testing of a curriculum package or module for about four weeks of instruction. This portion of the study encompassed the framing of objectives to Taxonomy specifications, the representation of the objectives in the curriculum content, the development of the needed teaching materials and the construction of measures of assessment. The unit was entitled "Preparation for a Dual Role: Homemaker-Wage Earner" and included historical background of the dual role, status of women's employment today, making decisions regarding employment, costs of employment, provision for care of children and management of money. Though largely reproducible, the package is not completely so since some options were left to teacher choice, i.e., components such as resource speakers, field trips locally, etc. Materials used by students and included in the package fall into three categories: 1) transparencies and other visuals, 2) written materials, and 3) enactive devices such as games. Guides for each topic for the use of the teacher and an achievement test in two forms are also included.

The package was tested using 604 high school juniors and seniors, primarily girls, in 32 home economics classes taught by 29 experienced teachers in big city, small city, central rural, suburban and area vocational schools in New York State. Nine of the teachers, each with one class, and each in a different school, formed a pilot group to help plan and pretest the curriculum. Teacher evaluation of the package on a specially prepared descriptive rating scale indicated the curriculum package as worthwhile and a valued resource to use again; they considered the instructional materials good, the topics relevant and teaching methods appropriate. Teachers were receptive to the idea of curriculum packages in general if they could be free to adapt material to the needs of their own students. Measurement of academic achievement was made from gain scores on equivalent forms of a test administered pre- and post- instruction. Statistically significant gains were made.

Statewide evaluation of the effectiveness of curriculum materials in the areas of child care and clothing was carried out by Horn (1966). At statewide curriculum workshops in Minnesota, resource units had been developed: generalizations, learning experiences and objectives were selected or formulated. The units were reviewed by a select number of classroom teachers, teacher educators, curriculum developers and principals. Revisions incorporated suggestions received. To obtain a sample for testing the curriculum materials, Horn surveyed home economics teachers in Minnesota relative to the use they made of the resource units. Teachers responded in five categories ranging from "extensive use" to "none"; a random sample of teachers was drawn from each category. Approximately 600 teachers were involved in testing the materials.

Horn developed test items at three levels of the Taxonomy of Educational Objectives: Cognitive Domain based on unit objectives, and pretested and revised them to ascertain the degree to which the objectives had been attained. Minnesota Scholastic Ability Test scores or I.Q.s, as well as scores on Horn's tests, furnished data to test the hypothesis that there would be a difference in students' test means dependent on the use their teachers had made of the resource units. Results showed that student achievement was highly correlated with use of the resource materials; as usage increased there was a significant positive gain in test scores.

During the 1966-1969 period curriculum materials were produced for a number of home economics areas of study, some incidental to research objectives. Cozine (1968) developed curricula for occupational classes in child care, food services and clothing services; the Horn study (1966) produced materials for the study of child development and of clothing. Experienced teachers were found to be receptive to the idea of using specially developed modules of curriculum materials (Boleratz, 1967; Hughes, 1968) though student teachers would prefer to develop their own materials (Boleratz, 1967). Needs for additional curriculum materials were identified in several surveys. Teachers felt they did not have the needed resources for teaching financial security concepts (L. Johnson, 1965). Gatlin and M. Johnson (1967) found a lack of curriculum materials for use with slow learners. Teachers in the newly organized occupational classes were sensitive to the need for more audio-visual aids (M. Johnson, 1968; Gould, 1968).

Needs of Learners

Vocational education provides men with training for achievement in the work world and provides training for women's achievement in the home environment. Scruggs and Souder (1966) sought evidence of a posited relationship between the two. If achievement in the home is related to success of a man in the world of work, knowledge of such a relationship could serve as one basis for determining the purposes that need achieving and the people who need serving by vocational education. Their exploratory research was guided by objectives of identifying characteristics of the home environment of skilled, semiskilled and unskilled workers possibly related to the husband's employment record; of testing various methods of obtaining information; of developing a rationale consistent with the findings and hypotheses to be tested later in a more comprehensive study of relationships between employment and home environment.

Two criterion groups of 20 employees of a manufacturing firm were identified based on wage grouping. Employment variables studied included: wage group; number of successful bids upward and mobility across wage groups; income received from company, from other sources and total income; number of absences; hours absent and absence due to illness; number of suggestions to the company. Home environment categories of variables included: clothing behaviors, housing, social characteristics, child development and family relationships, food and nutrition, management of resources, health. Data were provided by the company, by homemaker interviews and by questionnaire responses from husbands. These data were analyzed by structuring case studies, comparing criterion groups and intercorrelating 116 variables.

Scruggs and Souder discovered that the employment variables were positively related to such psychological characteristics of the wife as her home management abilities, suggestions for house improvement, and clothing preferences, and to the type of clothing worn by the man to work. Many of the variables tested showed significant relationship and therefore a further study of the identified relationships was recommended. Data additional to those in the Scruggs-Souder report are given by Souder (1967). She presented and analyzed case studies of six of the 40 families in the sample. Analysis of the case studies disclosed that certain home-environment characteristics accompanied high achievement of the husband on the job as measured by achievement on three or more of five employment variables: wage group, mobility in the company, absenteeism, suggestions made by employee to company, and wages. Characteristics of home environment exhibited to a high degree and related to three or more measures of high job performance were: quality of housing; neatness and cleanliness of the house; quality of clothing owned by the homemaker; knowledge of the homemaker concerning clothing and textiles; social participation of the family; goal-directed behaviors of the family, sharing of common goals, future orientation, and recognition by the homemaker of her personal strengths and limitations.

Christmann (1967) sought information on problems encountered by Iowa girls employed directly after high school. A non-random sample of 491 unmarried girls (72 percent of those contacted) answered questions relating to their difficulties in: 1) acquiring and relating to employment, 2) personal and social adjustment, 3) use of money, 4) food management, 5) food preparation, 6) purchase and care of clothing.

With increased number of semesters of home economics completed the amount of difficulty recognized by the girls decreased only in food preparation and purchase and care of clothing. Problems related to nutritional knowledge were recognized as being of greater difficulty than food preparation problems, i.e. eating breakfast, weight control, getting variety and the right kinds of food for good health. Other problems identified by a majority of respondents included keeping on a budget, making clothing money stretch, joining organizations, getting involved socially, meeting new friends and deciding on type of work.

Money management practices of teenagers from low-income families were surveyed by Fults and Zunick (1967). Information was obtained from 252 boys and 358 girls aged 14-18 by means of questionnaires administered by teachers during class sessions. The non-random sample was drawn from six counties in southern Illinois classified as depressed areas. About a third indicated they had an allowance; about a third worked every day for money and over half worked for pay during vacations. From whichever source money was obtained, the teenagers spent two dollars or more a week of their own money on hobbies, lunches, entertainment and clothing and about a dollar a week for school supplies, grooming, church contributions and saving. Only 14 percent said they had learned about money in the classroom; about a fourth said they learned from parents and somewhat over half indicated that they learned by experience.

The needs of learners in occupations courses which are additional to specific job skills and knowledge have been examined in data furnished by employers of home economics program trainees. Employers have indicated that training programs for home economics occupations should help students gain human relations skills and positive attitudes. Suggestions include: assumption of authority, execution of instructions, ability to work well with others, positive attitudes toward work. (Beaver, 1967; Robinson, 1968; Miranda, 1968; Howell, 1968).

Ebert (1967) used a variety of methods for obtaining information needed as a basis for developing curricula in home economics aimed at meeting the needs of the educable mentally retarded. Among the methods used, she: 1) reviewed literature relating to mental retardation; 2) studied characteristics of individuals placed in special education classes for the educable mentally retarded in public high schools; 3) examined and analyzed methods and curriculums planned to serve their special needs; 4) interviewed special education teachers, home economics teachers, supervisors of work-study programs, and employers of mentally retarded students who had completed work-study programs; 5) made personal observations in program classrooms; and 6) did case studies of five girls enrolled in a senior high school program in home economics for the educable mentally retarded.

Several studies made contributions to knowledge of present-day adolescents needed for development of useful curricula and materials. Bert (1967) found that almost all girls in her sample wanted to graduate from high school; a majorty, even those with low or average grades, wanted some kind of post-secondary education; and about a third wanted to graduate from college. Their expectations of education and occupations were less than their aspirations though at a higher level than their parents had reached. Hughes (1968) found that although students with more ability, as measured by standard intelligence tests, were able to perform better on written tests at each level than those with less ability, students in each ability group were able to perform equally well at levels of knowledge, comprehension and application. The less able were able to translate, to interpret, to extrapolate and to apply just as well as they could learn facts. She also found in her sample that students would work for school grades whether they liked or were interested in a subject or not, mostly for reasons having to do with their effect on life after school.

Adolescent girls were interested in occupational courses in child care services more than other home economics related occupations (Dowell, 1967; Robinson, 1968). Rollings' (1968) data revealed girls counseled for educational and vocational planning showed more orientation to short and long-range vocational choices and plans than did similarly counseled boys. Young employed high school graduates found one of their most troublesome problems to be that of choosing a vocation. They also considered managing their money and succeeding in social relationships to be very real problems (Christmann, 1967).

Bert's study (1967) showed that most high school girls wanted and expected the traditional role of full-time homemaker. Hughes (1968) also pointed out that though girls may be willing to take the dual-role of wage earner homemaker if it is necessary, they preferred to be full-time homemakers. Nelson and Goldman (1969) found that first choice of males for their wives was for them to be homemakers only. Manning (1967) discovered few college males would be willing to make sacrifices to further a wife's career.

On the basis of the data she collected, Ebert recommended: basing the home economics curriculum on the three major objectives of occupational adequacy, social competence and personal adequacy. She also recommended correlating the subject matter of the home economics program with concurrent experiences in their special education class and that teachers employ methods based on theories of learning of Hebb and Piaget that seem to have the greatest promise for the educable mentally retarded. She outlined areas of study with emphasis on the most crucial of learnings, in extremely simplified form, from each aspect of home and family living, stressing in each cleanliness, appearance, getting along with others, safety and management.

Factors Related to Curriculum Decisions

In studying classroom practices of high school home economics teachers for the purpose of providing guidance in the teaching of home management, Kister (1967) used the responses of 125 Ohio classroom teachers (of 200 requested) to a questionnaire with items based on seven courses of study and three home management textbooks. Data revealed that of the total time devoted to teaching home economics, an average of 2.7 percent was used for teaching home management theory and 2.8 percent was spent in teaching work simplification. The majority of learnings were included in other than specific home management units.

A regression analysis was carried out for assessing the relationships between amount of time spent teaching home management and a) years of teaching experience, b) felt adequacy of preparation to teach management, c) availability of current information, d) teachers' and students' interest in management. Students' interest, adequacy of information available to the teacher, and teachers' interest were significant in determining total time devoted to teaching home management. Kister concluded that one of the biggest problems in teaching management was lack of student interest and one of the major needs was developing interesting procedures and materials to use with students, particularly emphasizing visual aids. The latter item was a factor in Hughes' (1968) decision to design her curriculum package with emphasis on management.

Gerdes (1968) questioned 104 graduates of Iowa State University who had completed requirements for home economics education within the period 1957-1967 and were teaching in Iowa, concerning the extent to which they taught the various aspects of home economics and how well prepared they felt to teach each of those aspects. Of 115 aspects identified in the five curriculum areas outlined in *Concepts and Generalizations: Their Place in High School Home Economics Development* (American Home Economics Association, 1967) only eight were emphasized extensively by these teachers. Three of the eight were from food and nutrition; two from human development and the family; and one from management and economics; one, housing and design; and one, textiles and clothing. Food and nutrition aspects comprised 11 of the 18 aspects teachers reported they felt adequately prepared to teach.

Relevant to problems of curriculum development in the secondary school home economics program are data from the national survey of staffing procedures of college and university departments and colleges of home economics. More than half of the college graduates with a major in home economics become teachers (Swope, 1967). Data indicated that the largest percentage of total instructional staff (42 percent) was in the areas of foods and nutrition, textiles and clothing, and that nearly one-half of all graduate assistants were in these areas. In addition, administrators' long and short-range projections place one-third of future needs in these categories. Whereas the home management, family and consumer economics area currently has 12 percent of all staff, nine percent of all graduate assistants, the area was seen by administrators as the one of least need in both short and long-range projections. These data came from a 72 percent return of questionnaires sent to all institutions offering at least a baccalaureate degree in home economics. Seventy-eight percent of all land-grant and municipal institutions, 85 percent of other state institutions and 61 percent of non-public institutions are included.

Since the publication of Coon's National Study of Home Economics in the Secondary Schools in 1962, home economists have been urged to place greater emphasis on the teaching of management, human relationships, social development, family and consumer economics and child development. Judging from Swope's data it would not appear that there has been the change in the direction of emphasis of subject matter areas in college home economics programs which would prepare secondary schools teachers for the suggested change. Ostler's (1967) data presented evidence that teachers were aware of recent emphases in home economics education but did not put theory into practice. Procedures relating to traditional content phases of secondary programs received the highest and most consistent ratings.

Some indications come from surveys of students that the home economics program is less broad than is desirable. Only 14 percent of the 610 boys and girls in Fults' and Zunich's (1967) sample of 14-18 year-old pupils had learned about the use of money in the classroom. Christmann (1967) found that with more semesters of home economics studied in high school, difficulties of young employed girls decreased only for food preparation and purchase and care of clothing.

However, for at least one institution, a report of research related to such changes is available. Major changes in the teacher preparation program at Michigan State University in 1961 included a reduction of food preparation courses from 22-31 term hours to none, and a reduction of clothing and crafts courses from 14-23 term hours to three. Story (1967), using a scaled questionnaire, queried all 1961 "skill-oriented" student teachers (76) and those of the group who taught home economics the following year (43) regarding their job satisfaction. Responses were compared with those of all the student teachers (74) of the first year (1962) of the revised program and those of that group who taught following graduation (44). None of the hypotheses of differences between the groups on attitudes of job satisfaction was supported on the basis of questionnaire responses.

Summary

Home economics occupational programs were seen to be increasing markedly and several studies have offered guidelines for the necessary curriculum development. Researchers have been interested in identifying tasks ascribed related to home economics related jobs and identifying competences common to clusters of jobs. Exploratory probing of the relationship between home environment and a man's success on the job has produced a tentative model for use in further research.

Needs of learners as a basis for curriculum development continued to interest researchers. Problems of girls employed directly after high school, needs of the educable mentally retarded, and money management practices of teenagers were studied. Data from four researches suggested less attention has been paid to implementing a broad program in home economics education than is thought desirable.

One area for productive research and development appears to be in the area of curriculum modules. Significant positive gains in test scores were found related to the use teachers made of specially prepared curriculum materials in child development, management of homemaker-wage earner dual role and clothing.

EDUCATIONAL PROGRAMS

Only one research study seemed most appropriately included in this section although studies of the preparation and use of paraprofessionals (Coleman, Priester, Robertson, no date given; F. Alexander, 1967; Walton, 1968) and an investigation concerned with extension home economists (P. Alexander, 1968) reviewed in the Evaluation section might have been placed in this category. The study selected is concerned with the Future Homemakers of America organizations. Founded in 1945 under the co-sponsorship of the American Home Economics Association and the Home Economics Education Branch of the U.S. Office of Education, the FHA is presently composed of chartered state and territorial associations which in turn are composed of affiliated local high school chapters where home economics is a part of the curriculum. At the request of the National Advisory Board, the Department of Home Economics Education at the Florida State University undertook research to answer questions relating to FHA membership composition, chapter programs and resources, national office services and the organization of chapters. Jung (1966) explored the practices of chapter advisers with respect to membership, organization and assumption of responsibilities as part of the total project. Chapters selected by random sampling procedure consisted of 1,255 affiliates divided approximately equally among the four regions: Pacific, North Atlantic, Central, and Southern. Responses to a request for cooperation indicating the chapter adviser's willingness to participate in the study totaled 745; of this group, 87 percent responded to the questionnaire. The majority of advisers were teaching in communities of 5,000 or less in one-teacher home economics departments. In more than half of the cases, the advisers reported that the state department of education or local school administrator required an FHA chapter; the majority of the advisers had been designated as such simply because they were the only home economics teacher in their school. Membership for most students was voluntary though, in some schools, teachers "strongly urged" membership. Students not currently enrolled in home economics were permitted to serve as officers in a large percentage of chapters. Few teachers used class time for FHA activities. Responsibilities reported by most advisers included arranging for delegates to attend meetings above chapter level, acquainting officers with duties, collecting and depositing monies, and arranging for meetings and publicity. Nearly half of the respondents considered correlation of classwork and FHA activities to be difficult; over one-fourth had made no attempt to coordinate the two.

INSTRUCTIONAL MATERIALS AND DEVICES

Little recent research has been concerned with instructional materials and devices in home economics education. Three comparative effectiveness studies and two demonstrations of the teaching potential of instructional material comprise the research selected for review. Some suggestions relevant to areas where production and research of materials are needed arose from surveys. Two curriculum packages were produced and tested. Two reports of research concerned the use of simulation games in teaching; one was used to teach decision-making and the other budgeting.

Lattes-Casseres (1968), experimenting with a game to teach decision-making, randomly assigned her experimental treatment of game, lecture, and discussion and control treatment of case studies, readings, writing, lecture and discussion to 18 senior high school classes in Michigan. She found no significant differences in cognitive learning of decision-making facts, concepts and principles. Nor were there significant differences in interest, enjoyment of the classes or perceived relevance of the unit. Miller (1969) developed a simulation game to teach budgeting and compared its effectiveness with a case study method in 12 pairs of home economics classes of eleventh and twelfth grade students classified as academically poor in 10 New York State schools. Within a school, one class was randomly assigned to control and the other to treatment; class pairs were taught by the same teacher. A two-way unweighted means analysis of variance was used to test student scores from five instruments: 1) interview schedule, 2) observation rating scale, 3) attitude scale, 4) achievement test, and 5) retention test. Miller, too, found no significant differences between experimental and control groups in learning and retention of facts and principles nor in attitudes toward the subject content under study. However, students participating in the game revealed more interest in the subject matter than did those learning by a more traditional method. A conclusion reached in both studies was that a simulation game is at least as effective a teaching method as the more conventional method with which it was compared.

Campbell (1969) wrote and extensively field tested an essentially replicable linear program to teach measurements used in food preparation by junior high school students. Employed in a study designed to discover if a program could prepare students for laboratory procedures as well as help students gain understanding of food measurements, Campbell found that pupils studying by means of the program scored significantly higher at .01 than those in groups with textbook study followed by a lecture-demonstration on a written test of understanding. No significant difference was found between groups on the performance test. Reliability of the tests (i.e., written, .89, performance, .88) were determined by the split-half method using the Pearson product-moment formula with results adjusted by the Spearman-Brown prophecy formula. The significant difference between experimental and control groups in favor of programed instruction supported findings in numerous such studies.

Concerned with establishing programed instruction as an acceptable teaching technique for use in the professional home economics education sequence, Nelson, *et al.* (1966) developed and tested eight units of programed instruction for teacher preparation students. This study is reviewed in Teacher Education section.

For a research project focused on discovery learning, Boleratz (1967) provided a curriculum package which emphasized the relationships between content and process of learning. She selected five subconcepts related to values and structured learning experiences around perceiving and discussing illustrations of the concepts sequenced in relation to their degree of abstraction. Her package included an introduction designed to enable students to practice recognizing and making generalizations, discussion suggestions, questions to be asked, written and oral assignments, case studies, descriptions of situations, work lists, design for a bulletin board and detailed instructions for an exhibit. Student objectives were included as well as a summary of generalizations useful as a standard against which the teacher could compare student efforts to generalize about the content. Tested in a research project (described in Learning Process and Teaching Methods section), clear-cut evidence of student learning was presented. Experienced teachers who used the materials indicated they liked using the packaged unit though student teachers who also used the materials said they would prefer to develop their own.

Hughes (1968) also produced and tested a total package comprised of a variety of instructional materials to teach concepts relevant to the dual role of wage earner-homemaker for use in testing the cumulative hypothesis of the Taxonomy of Educational Objectives. This, too, was well received by teachers; evidence of student learning was presented. (Discussed in Curriculum Development section)

L. Johnson (1965) contacted a national sample of 600 teachers, with 75 percent returning information, concerning use of and need for printed materials to help students gain understanding of 13 financial generalizations and related concepts identified in the U.S. Office of Education analysis of the field of knowledge in home economics. Data furnished indicated that less than half the teachers reported they had enough materials concerning 76 of the 78 financial security concepts investigated. Ninety-three percent of the teachers responding said they used business-sponsored materials which were available at least occasionally. A national sample of 175 businesses and industries were contacted regarding their provision of educational materials; 91 percent responded. Replies revealed that somewhat more than half of these businesses and industries provided materials. Of materials provided only 46 percent were available to high school teachers with about 40 percent of these for use in home economics classes. However, over a third of those replying indicated they would start providing materials for high school home economics use. Fifteen percent of those who already provided materials would make additional materials available if convinced of the need.

Adapting materials for slow learners was a problem recognized by three-fourths of a random sample (81 percent response to 100 queries) of North Carolina home economics teachers at all levels of experience (Gatlin and M. Johnson, 1967). M. Johnson, *et al.* (1968) found that teachers of occupational home economics classes considered themselves handicapped by the lack of audio-visual aids and other teaching materials for such classes.

Gould (1968) evaluated both guidelines for the development and use of four types of audiovisual materials (i.e., 35 mm slides, overhead transparencies, programed instruction, 8 mm motion pictures) and sample sets of materials developed to illustrate the guidelines. Subject matter content of the sample materials was concerned with areas common to both gainful employment and homemaking courses: 1) child care, 2) foods, and 3) clothing. Sixty-seven of the 78 home economics teachers who taught classes in gainful employment or were cooperating teachers in the Oklahoma State University teacher-training program participated in the evaluation. The teachers considered the AV materials supplied were effective in teaching the concepts for which they were designed. Though they felt the guidelines provided useful information, teachers indicated they did not have time to develop AV materials and would prefer to use commercial materials if available in high quality.

Summary

The familiar finding of no significant difference in instructional effectiveness between old and new methods compared was found for studies reported on the use of simulation games. Such findings may reflect the extreme difficulty of controlling various intervening variables and/or lack of precision in measuring instruments. Programed instruction was seen to effect learning for seventh graders and for seniors in college. Teachers involved in the research projects which used curriculum packages indicated general acceptance of the idea of using such materials. Need for teaching materials and devices was indicated by teachers of slow learners and occupational students and those teaching financial security concepts.

LEARNING PROCESS AND TEACHING METHODS

Six studies represent the research done in home economics education relating to learning processes and teaching methods. Four were the latest in a series focused on a testing of the cumulative nature of cognitive behaviors; two were comparisons of teaching methods, and one was concerned with discovery learning.

Boleratz (1967) studied the relative effectiveness of learning by discovery. In this setting, students are presented with a problem situation. Information is withheld in order to stimulate search behavior and the learners are given an opportunity for the moment of insight ("act of discovery") and verbalization of a generalization based on principles, rules, ideas, or underlying generalizations. The experimenter developed a unit designed to teach five subconcepts related to values and a criterion test (reliability pretest, .55; post-test, .79). Data were collected from 15 selected groups of ninth and tenth grade home economics students.

Six classes of S's randomly assigned to the experimental treatment were taught by five teachers. Nine control classes were taught by five different teachers using units they had designed with learning experiences planned to communicate understanding and transfer of the same five concepts related to values contained in the experimenter-designed unit. Pretesting preceded the unit's sequence of five lessions by one week; post-testing followed the teaching after two weeks. No differences were found in the pretreatment for the two groups on the criterion measure. However, Boleratz found that those students who participated in the experimental learning program exhibited more ability to discover and transfer generalizations concerning values than those exposed to other teaching methods.

For her comparison study of two methods of teaching at the college level MacNeil (1968) randomly assigned students registered for a one-semester course in nutrition (N=132) either to a lecture-discussion treatment or a self-directed study treatment utilizing only 20 percent as many class sessions as in the lecture-discussion treatment. Both treatments were carried out by the same instructor. Students in both treatment groups increased their amount of nutrition knowledge but the lecture-discussion group increased significantly more. Students with either high or low ratings for autonomy as measured by the Omnibus Personality Inventory showed higher levels of achievement when taught by lecture-discussion method than did those similarly classified in the self-directed study group. Both groups showed comparable satisfaction with the course and method.

For several years the Department of Home Economics Education at Cornell University has conducted research concerned with testing the cumulative nature of specific cognitive behaviors. Early studies provided little evidence concerning the validity of the hierarchies under investigation but did allow greater insight into problems encountered in such research (Byrd, 1963; Jacklin, 1964; see Chadderdon-Fanslow 1965 Review and Synthesis). Thomas (1965) tested the cumulative hypothesis of the first three levels of the *Taxonomy of Educational Objectives: Cognitive Domain,* using physics subject matter in a teaching situation controlled by herself planning and teaching series of lessons to 102 seventh grade pupils. To test the cumulativeness of the taxonomy specifications, intercorrelations and regression weights were examined using the Guttman Simplex Theory.

Substantial support for the theory of cumulativeness was found. However, most of the level 1.00 items were found to have difficulties over .90, the 2.00 level from .19 to .98, and at the 3.00 level more than half were .20 or below.

Mehaffey (1967) conducted a study to validate the hierarchies of the Taxonomy, Cognitive Domain, with social science subject matter, using the teaching and testing method previously employed by Thomas. Expanding the first three Taxonomy levels by the incorporation of subdivisions, a test (reliability .74; item difficulties covering a very wide range) with items at seven levels was constructed and validated using subject content of social stratification. Data resulting from use with 112 eighth grade pupils did not comply with Guttman's Simplex Theory and tended to suggest inadequate testing. They did not support the hypothesis that one class of behaviors is likely to make use of and be built on behaviors found in preceding classes in the proposed hierarchies.

Zavacki (1968) replicated the Mehaffey study with certain changes: 1) two additional generalizations in the teaching-testing; 2) a 66-rather than 37-item test (reliability, .87); and 3) an N larger by 28. Data from the test yielded a correlation matrix which tended to follow the pattern of the Simplex Theory when Extrapolation of the Comprehension level was placed before Abstractions-Universals of the Knowledge level. These results may have stemmed from a higher reliability of the Extrapolation subset of items (.66) than that of the Abstractions-Universals (.40).

Hughes (1968) undertook a study similar to the three just described but one which incorporated the researchers' suggestions for improving the model. These included: 1) a larger N (604 eleventh and twelfth grade students); 2) more control of the learning situation (though with the larger N more teachers were needed) by providing a curriculum package which specified methods and contained materials needed for teaching a unit on the topic, "Preparation for a Dual Role: Homemaker-Wage Earner"; 3) a pretest to determine level of achievement prior to the teaching unit (equivalent forms of an achievement test used pre- and post-instruction, KR reliability .80); 4) test items carrying a single idea through all of the Taxonomy levels used; and 5) careful control of the difficulty level of all items (mean difficulty 52 with range among levels 46 to 56).

With Guttman Simplex analysis, Hughes' data yielded strong support for the cumulative nature of the cognitive domain. Effects of type of question, number of questions per level, and size of sample were all studied. Increasing the number of questions per level improved the simplex structure. Use of sets of questions, each set measuring aspects of the same principle but at different levels of mental complexity yielded an improved simplex structure (though this finding was not conclusive since sample size for the trial was increased from an N of 100 to one of only 250). Effect of sample size was strikingly clear since an N of 533 revealed a simplex on the same test items for which an N of 100 revealed no tendency toward a simplex.

Possible difference in performance at the selected cognitive levels as a factor of differences was studied within an analysis of variance format. Although students with more ability, as measured by standard intelligence tests, were able to perform better at each level than those with less ability, students in each ability group were able to perform equally well at each of the seven cognitive levels.

Hughes extended her study beyond those of the earlier investigators by an exploratory section testing the hierarchy of affective behavior as postulated in Domain II of the Taxonomy of Educational Objectives. For this purpose she devised a self-report instrument on attitudes toward a dual role with each item written to reflect an objective at seven levels and sublevels of the affective domain. Reliability assessed by test-retest method was .89. Construct validity was obtained by having four judges rate the items for placement at Taxonomy levels. When the data were analyzed by the seven levels and sublevels no tendency whatever toward a simplex was found with an N large enough to detect a hierarchy if one existed.

Four studies have been included in the section entitled Instructional Materials and Devices which have relevance to the topic of this section. These are Campbell (1969), programed instruction research; Nelson, *et al.* (1966), a demonstration of the effectiveness of programed materials; Lattes-Casseres (1968) and Miller (1969) using simulation games as a method of teaching.

Summary

The latest in a series of research studies based on the Taxonomy of Educational Objectives furnished strong support for the postulated cumulative nature of the cognitive domain. Encouraging to teachers is the finding that low ability students could perform equally well at each of seven cognitive levels tested.

Especially prepared curriculum materials to provide the controlled teaching situation required in two of the studies reported in this section should prove to be valuable additions to home economics teachers' resources. Carefully produced, each around a small core of objectives, they may provide models for efforts in flexible program designing. The tests mandated by the research design distinguished these particular units as capable of producing results in students.

STUDENT PERSONNEL SERVICES

Research related to characteristics of students in home economics programs and information useful in counseling is reviewed in this section. A series of studies examined the affective dimensions of vocationally-oriented behavior in secondary school youth; one research investigated the educational and occupational aspirations and expectations of adolescent girls. Two studies are concerned with attitudes toward wives working in gainful employment; work patterns of women are examined in another.

Characteristics of Students

A research project dealing with the interrelatedness of anomie, alienation, vocational planfulness and various measures of socioeconomic status has been carried on in the Department of Home Economics Education at Cornell University since 1965 (Follender, 1967; Green, 1968; Blackwell and Green, 1969). Purposes of the several studies include: 1) provision of a degree of construct validity for the anomie concept and of an instrument to measure it; 2) determination of indices of anomie and such correlates as community and family socioeconomic status (SES) and vocational planfulness in a high school population. Results of the studies were not held by their authors to be conclusive but they seem a useful step in developing understanding of adolescents in the secondary school setting.

The investigators used sets of items representing aspects of negative mindset from the theoretical positions of Durkheim, Merton, Srole (anomie) and Seeman (alienation) for the research tool to provide operational definitions of nine variations of negative mindset. Validation efforts sought to differentiate among the variants and to distinguish them from positive feelings toward vocational planning and perceptions of self in relation to social class. Analysis by means of the multitrait-multimethod matrix disclosed anomie measures were not discrete from those of alienation and affective planfulness. Further analysis by means of factor analysis and Guttman's radex analysis did not strongly support all constructs as separable though support was given for "Normlessness" as a clearly measureable construct. No clear cut support was found for Merton's position on SES as a factor in negative mindset. The investigators concluded measures of higher technical quality (the subsets of items ranged in reliability from .08 to .66) are needed.

The researchers used multiple regression analysis to test the hypothesis that SES is inversely related to anomie and alienation and directly to planfulness. Controls were placed in social mobility aspirations as well as some individual and community variables. Results were inconclusive with a strong school effect apparently exhibited. School-community type (i.e., rural, suburban, small city, large city) emerged as a useful predictor for all anomie and alienation measures under sex and grade controls in a $p \times q \times r$ analysis of variance factorial design. There were suggestions, with data only from urban sample, that school program variables such as student's major may account for substantial amounts of variance in negative mindset and vocational behavior. Among the findings of the series of studies were evidences of a degree of interrelatedness among the variables investigated—anomie, alienation, perceptions of self in relation to social class, and vocational planfulness—that would warrent further research along this line.

Bert (1967) investigated the educational and occupational aspirations and expectations of adolescent girls and relationship of personal and family characteristics to them. Three Florida counties were selected so that one had characteristics similar to the state average in rural-urban residence of the population, in family income and in white-non-white proportion; one had a majority of rural residents, low family income, large proportion of non-white residents; one had a majority of urban residents, high family income, low proportion non-white residents. From the school systems of these three counties a random, stratified sample of 1493 adolescent girls enrolled in the ninth and eleventh grades was drawn; 1444 usable subjects resulted. Data were subjected to chi-square analysis to determine probabilities of significance.

Bert used sets of items adapted from Moore and Holtzman's family relationships scale and from the Home Life Scale of Stott and from Rosenberg's scale measuring self-concept as well as a set of items she devised herself. Reliability of the entire questionnaire comprised of the four item sets, plus background data furnished by the students was based on an analysis of differences in answers between two administrations of the questionnaire two weeks apart taken by a subsample of students.

Almost all subjects wanted to graduate from high school; over half desired some kind of post-secondary education; nearly a third aspired to graduation from a four-year college. Expectations of these levels of educations were somewhat less than the aspirations. Clerical jobs, teaching and nursing accounted for over half the occupational choices; only five percent had made no choice. Expectations of jobs were similar to, although somewhat lower than, aspiration; 16 percent admitted they did not know what to expect.

White respondents aspired to higher educational levels, as did the older subjects. As would be expected, more students with high grades wished to graduate from a four-year college; less to be expected, those with average and low grades wanted to continue their education beyond high school. Upper socioeconomic class subjects planned and expected to obtain a higher educational level than did those of lower SES. Educational aspiration was significantly related to such aspects of self-concept as optimism, ability (as seen by the self), trusting people, self-respect. Fewer aspects of self-concept were related to educational expectations. Data from items related to married women working suggested that the adolescent subjects reflected the social expectations of the traditionally feminine roles. In general subjects wanted and expected to have an education similar to their fathers'. Subjects who had held part-time jobs aspired to a significantly higher level of education than those who had not. The largest group of subjects indicated that they planned to complete their education and to work for a time until marriage. The subjects expecting a post-secondary education also expected their husbands to have upper class occupations. There were no significant differences between races or between grade levels in occupational aspiration. Most had aspirations for occupations at a higher level than their parents.

Wives Working in Gainful Employment

Concerned with realistic education programs for girls and women, Lee, *et al.* (1967) compiled statistics on women's work patterns and pointed out some unique concerns of women workers. Of particular importance to curriculum planning and to counseling of girls are such findings as these: 1) nine out of 10 women will work at paid employment sometime during their lifetime; 2) women make up 35 percent of the labor force, working for a median yearly salary about $2500 less than that of males and often holding jobs not commensurate with their educational background and ability; and 3) the lowest-paid jobs in industry and service occupations have historically been held by women.

It is interesting to note, in light of the findings of Lee's women's work patterns study, the attitudes of those most concerned about future occupations of females. Blackwell and Green (1969) suggested, as a result of their study on anomie and related factors among adolescents, that the socio-economic-based success goals assumed to be operant in the total population may be much less important to adolescent girls than to boys.

Based upon answers to a scaled questionnaire from high school students studied in 1959 (72 girls; 32 boys) and followed up in 1966 (61 girls; 27 boys) and from a group of high school students queried in 1965 (45 girls; 30 boys), Nelson and Goldman (1969) examined attitudes toward a wife's gainful employment at various stages in the family life cycle for a variety of reasons. Data used in the study made it possible to make two comparisons: first, between two comparable groups at different times, and second, between the responses of a single group at different times. Each comparison was made for both males and females of the groups. The findings clearly indicated that men and women in all groups differed in their attitudes, with women more in favor of a wife's employment outside the home, and that women several years beyond high school were significantly more positive on the attitude scale than either of the female groups tested while in school. Similarly, of the male groups, those out of high school held significantly more favorable attitudes toward a wife working than did the other male groupings. The boys and girls queried in 1965 were agreed that the most important reasons for a wife to work would be to help raise the family's standard of living, to relieve the wife's frustration and boredom with homemaking or to provide occupational skills needed by the community. Male and female of the other two groupings were in little agreement concerning the circumstances making work desirable. Follow-up data showed that both men and women had become more accepting of a wife working. When asked to project five and 10 years into the future, however, males, almost without exception, desired a wife who was a homemaker only. About half the females shared this desire.

To investigate viewpoints of male graduate students regarding their wives working at different stages of the family life cycle, Manning (1967) drew a random sample of 320 from 1551 male full-time graduate students enrolled at the University of Arizona during 1965-66. Replies from 58 percent of them furnished data. The respondents were divided into three groups according to the stage in the family life cycle they represented: unmarried, married but with no children, married with children. A pretested questionnaire furnished the means of obtaining opinions of men who were for the most part preparing for upper-class occupations and thus considered more liberal in their attitudes than men in other occupational groups. In general, men were willing for their wives to work at the two stages of the family life cycle when there are no children in the home but unwilling when there are pre-school children in the home. More married than unmarried men were willing for their wives to work whether at a career or a job just for a pay check, under most circumstances and during all stages of the family life cycle. The most acceptable reason for wives working was economic necessity. Among the leisure activities men found more acceptable for their wives than work were reading, pursuing special interests and hobbies. Manning considered this finding indicated some recognition of women's personality needs. Men preferred that wives work rather than spend their time watching TV, listening to radio, shopping leisurely or expanding housework to fill the time available, a finding consistent with the work ethic so much a part of the American culture. Unlike the portion of the sample who were married and with children, very few of the married without children and the unmarried men were willing to make sacrifices for the wife's career.

In Hughes' (1968) study (reviewed in Learning Process section) 62 eleventh and twelfth grade girls randomly selected from 443 subjects were interviewed concerning their willingness to assume a dual role, homemaker-wage earner. Thirty-eight indicated that they were willing to have the dual role if it were necessary; only 17 definitely wanted it or planned on it. Bert's (1967) data indicated that adolescent girls' responses to questions related to married women working reflected their expectation of the traditionally feminine role of homemaker-wife-mother.

Information Useful in Counseling for Occupational Home Economics

Of particular interest to teachers and counselors having responsibilities for guiding students in relation to occupational programs are the following studies: Dowell (1967); Flanagan (1968); M. Johnson, *et al.* (1968); Robinson (1968); Rollings (1968); and Smalley (1968).

Flanagan compared selected personal characteristics of students enrolled in three types of secondary school home economics classes in Florida: gainful employment (N=103), comprehensive (N=163) and elective (N=99). Data from student questionnaires and achievement scores and aptitude data furnished by the teacher were analyzed by chi-square tests. Students in the three groups were similar with respect to IQ (average in the 90-109 range) academic achievement, SES (upper-lower class predominant), and work experience outside the home. Significant differences among students in the three categories appeared when they were compared in the following variables: a) mother's employment, b) parents' occupations, c) stated plans following high school graduation, and d) race. The gainful employment group was the only category where the majority of mothers did not work full-time. Parents of the students in the gainful employment and comprehensive categories were in service occupations, those of the elective group were in blue-collar jobs. Gainful employment students' stated plans were to go to work following high school graduation; those in the comprehensive group were to attend college; elective category students planned to attend special schools after high school. A majority of the comprehensive students were non-white, the other two, white.

Dowell (1967) found ninth and tenth grade home economics students (Duval County, Florida) were most interested in child care services jobs, with interest in institutional and food service jobs ranking second. Robinson found that 80 percent of her sample of 678 high school students were interested in a post-secondary curriculum which would include observation and part-time try-out employment while enrolled in school. They showed most interest in care and guidance of children curricula and least for institutional management and support services curricula.

Home economics teachers (187 of 199 queried) from 114 Iowa high schools, randomly selected, furnished data relating to the extent and kinds of home economics-related occupational information they provided pupils during the 1967-1968 school year (Smalley, 1968). The data revealed that over one-half of the teachers were providing no information in most of the categories of occupations related to home economics. Although over 80 percent of the teachers presented some occupational information it appeared that they were using a variety of methods and materials to present a small amount of home economics related occupational information.

Ninth grade girls of low ability and low SES in Rollings' (1968) experimental study, who participated in an educational-vocational planning course and received counseling, demonstrated more orientation to immediate, intermediate and long-range vocational choices and plans than did similarly participating boys. There were no significant differences between boys and girls in knowledge of aptitudes needed, attitude toward the world of work, and application of key concepts related to self-appraisal and educational-vocational planning.

M. Johnson, *et al.,* (1968) surveyed teacher opinion of suitable criteria for enrollment of high school students in occupational classes. From among all those in United States teaching occupational home economics courses in 1965-66, 110 teachers were randomly chosen. Findings indicated teachers believed student interest in the proposed course and the area of training important for success in the course; previous enrollment in home economics courses was desirable, and that the courses should not necessarily be limited to seniors.

Summary

Implications for curriculum emerge from the studies reviewed in this section. They suggest a need for expanded vocational education to serve a much larger portion of the adolescent population. They indicate, too, the need for more attention to affective goals in education for vocational capability. They point to the necessity of realistic educational and vocational counseling for girls, the need to explore possible sex differences in the process of vocational development and the desirability of thorough exploration of career patterns of girls.

An emphasis on programs to prepare youth and adults for employment outside the home was apparent during the years covered by the review. Such emphasis was needed because of the introduction of occupational programs in home economics in many schools. However, studies in the area of student personnel services for those engaged in or entering into the work of the home need to be continued.

FACILITIES AND EQUIPMENT

Available to those responsible for planning space and facilities to house occupational preparation programs in home economics is the guide prepared by Meckley, *et al.* (no date given). Emphasis on educational programs as the basis for planning space and facilities, on need to accommodate change, and on flexibility for maximum use underlies this detailed guide.

No researches on facilities and equipment per se were located. However, findings *related* to facilities for teaching occupational home economics programs came from two evaluation studies (Nelson and Jacoby, 1967; 1968). Twenty-eight teachers provided data. Most of these individuals mentioned that insufficient institutional type equipment constituted a problem for teaching home economics occupational courses. Teachers of nurse aide classes noted that the most valuable facilities and equipment were mobile hospital-type units for teaching patient care and kitchen equipment for practice in diet preparations. Teachers in food service courses indicated that in addition to usual home economics laboratory equipment, desirable learning experiences could be made possible by means of freezer, blender, coffee urn, grill, deep fat fryer, slicing machine and tray stands. A common problem for teachers of such courses involved scheduling use of school cafeteria facilities. Three of the 28 teachers taught occupational courses in child care services; each considered a range and refrigerator, protected outside play area, and rest facilities essential for providing the necessary learning experiences for students.

TEACHER EDUCATION

Many studies concerned with the several aspects of teacher education were available for review. Those reported here include a study of predicting effectiveness and six exploring relationships of personality characteristics to teaching. One study was involved with selection and retention procedures in college departments of home economics education; four investigated the efficacy of innovative methods in the professional preparation of teachers. One study surveyed beliefs and practices of secondary school home economics teachers as compared with those of college teachers and teacher educators.

Selection and Retention Procedures

Snell (1966) studied practices and beliefs concerning selection of potential home economics teachers. Of 232 chairmen of departments of home economics education approved for training federally reimbursed home economics teachers, 175 (75 percent) submitted information concerning selection and retention procedures in the institutions represented and practices they would like to see initiated. Sixty percent admitted any student to home economics teacher education who had matriculated in the institution; 75 percent admitted teacher preparation majors as freshmen.

About a third of the institutions formulated selection-retention procedures at the level of the home economics department; another fourth of them used procedures cooperatively developed by the education division and home economics education. The screening of home economics education majors was reported by only 12 percent of the institutions at the department level but in three-fourths of the institutions home economics education staff participated in decisions made by the division of education.

Snell found that somewhat over two-thirds of the institutions eliminated majors prior to student teaching if they had less than a C average. Responses concerning preferred practices revealed 80 percent of the home economics teacher educators would like a pattern based on a collection of objective (i.e., battery of tests covering aptitudes, achievement and personality factors) and subjective evidence, with guidance of students stipulated as one of the major aspects of selection and retention and continuing staff contacts during the freshman year. A large majority of the teacher educators would like to have substantial evidence of an entrant's acceptable standards of English usage and oral communication ability.

Beliefs and Practices of Teachers

Ostler (1967) examined the extent to which teacher competences perceived as desirable by secondary school home economics teachers differed from those seen as desirable by home economics teacher educators and college teachers of home economics. She also investigated the extent to which teaching methods used by teachers differ from those they believe to be appropriate and those college personnel perceive as appropriate. In addition, Ostler questioned teachers as to the primary source of influence on their selection of methods and on their beliefs about teacher competency and methodology.

Questionnaires were sent to a total of 731 subjects: 1) all New York State home economics teacher educators, 2) all college subject matter specialists, 3) all local supervisors, 4) a randomly-drawn 20 percent of all teachers in upstate New York, and 5) half of a selected list of New York City teachers. Usable returns totaled 43 percent (N=313): 1) 246 secondary teachers, 2) five supervisors, and 3) 62 college personnel. Data were subjected to one-way analysis of variance and subsequent examination of paired combinations of the independent groups. Correlations between teacher endorsements of actual and ideal practices were examined.

All groups of home economics respondents tended to agree as to the relative desirability of ideal teacher competences and as to appropriateness of teaching procedures. Theory and practice tended to be more homogeneous among teachers in the very large urban school system than among those representing smaller urban, suburban and rural school districts. There was evidence that teachers were aware of recent emphases in home economics education programing but did not put theory into practice. Procedures related to traditional content phases of secondary programs received the highest ratings. Experienced teachers of home economics served as the single most important influence upon the beliefs and practices of other teachers of home economics; college content specialists tended to exert greater influence than did teacher educators.

Gerdes' study (1968) of Iowa State University graduates also pointed to a lack of emphasis on other than the traditional home economics content and indicated that these teachers felt best prepared to teach the traditional content. A sample of Ohio teachers spent only a very small proportion of class time teaching concepts related to the important area of management (Kister 1967).

Prediction of Effectiveness

As part of a long-range project at Iowa State University to improve prediction of successful teaching, Crabtree investigated factors which might predict successful teaching, including personal qualities, attitudes toward different groups and grade point averages. The author states: "Composite prediction measures were correlated with composite measures of success (pupil gain in problem-solving, teacher-pupil rapport, and adjustment to school and community as judged by an administrator). The best predictors yielded a correlation of .41—too low for individual prediction" (reviewed in Chadderdon and Fanslow, 1966).

Hypothesizing that Crabtree's statistical approach itself was not valid, Gilbert (1966) explored the use of clinical analysis for predicting teaching success of 80 Iowa State University graduates including an attempt to determine the number and type of judges needed to make reliable estimates. Predictive data available as part of the long-range study included cumulative quality point averages, scores on the Guilford-Zimmerman Temperament Survey, The Minnesota Counseling Inventory, the Johnson Home Economics Interest Inventory and Lehman's Just Suppose Inventory. Supplementing these data, information was provided the judges concerning precollege work experience and activities, the adviser's statement on student's strengths and limitations, the student's statement of motivation to teach obtained from Application for Admission to Teacher Education Curriculum, and excerpts from Instructors' Reports indicating characteristics of behavior observed by classroom teachers in the College of Home Economics. Success criteria were the same as those used in the Crabtree study.

Data from 10 judges (i.e., two clinical psychologists, five guidance counselors, three home economics education faculty), analyzing 16 cases randomly assigned, provided estimates of each case for two different teaching situations and a certainty of estimation score on an 11 point scale. Judges were asked to explain certainty scores below six. An analysis of variance yielded statistically significant differences among judges, subjects and measures beyond the .001 level. Reliability coefficients computed for one judge was .142; estimated for 10 judges, .623. A correlation of judges' estimates and the composite success score was thus shown to be not feasible, and was not carried out.

Innovative Methods

East and Boleratz (1968) undertook a study to evaluate the feasibility of providing a living-working experience for increasing future home economics teachers' awareness of working (lower) class patterns of life and work. During six 11-week periods, 13 students participated in pre- and post-seminars, and living-working experiences. The living experience consisted of joining a selected family as a participant-observer and assuming the role of older sister and daughter. All families were characterized by low income, many members, and family crises. Each girl paid room and board, followed the rules of the household, worked eight hours a day and shared her free time with the family. She was expected to live on the money she earned from her job. The work experiences consisted of unskilled jobs that in some instances paid less than minimum wages. Participants worked as cafeteria and restaurant help, assembly line workers and drug store clerks.

Evaluation of effectiveness of the living-work experience was made by pre- and post-measures of the extent of their self-actualization (Shostrom's "Personal Orientation Inventory"), openmindedness (Rokeach's "Dogmatism Scale"), knowledge of the disadvantaged (developed for the study) and acceptance of families and children different from oneself (Lehman's "Just Suppose Inventory"). Group scores were compared by t-tests to establish differences between group means. Case studies for each participant were also used to assess changes in personality, knowledge and attitudes.

The participants changed significantly toward greater self-actualization and had become more accepting of families and children different from themselves. They had not become more openminded nor did they gain in knowledge of the disadvantaged (though they did gain significantly on a measure of certainty of their answers on the knowledge test).

Participants and project leaders concurred that awareness of the life and work patterns of the working class had been successfully facilitated for the participants and that it is feasible to incorporate such experiences into the curriculum of the preservice home economics education major. Project leaders recommend that experiences that provide students with some in-depth relationships with people who are different from themselves be considered as part of the curriculum of all teacher candidates.

Ray (1968) sought to determine if prospective home economics teachers could be helped through group counseling to sort out conflicting demands of professional expectations and commitments, on the one hand, and personal and marital commitments, on the other. A controlled experiment was set up involving four sets of prospective teachers (60, total), three home economics teacher educators and two psychological counselors. Random assignment of students to one of two subgroups and then random assignment of group to experimental (group counseling for two periods per week for eight weeks in the final term and two sessions for each of two weeks in the second term) or control (regular program) conditions was carried out. There were no significant differences among the eight subgroups on any criterion: 1) grade point averages cumulated up to the semester of the experiment; 2) scores on four measures of personal professional self-concept (Shostrom's "Personal Orientation Inventory," Self Concept sub-scale of Bill's "Index of Adjustment and Values," Loftis' "Measure of Professional Commitment," Ray's "Student Estimate of Teacher Concern"); 3) student teacher ratings; and 4) grade point average for the semester including student teaching.

Promising leads for further study, however, stem from analyses made in addition to those testing the hypotheses. The results of a factor analysis suggested a dynamic relation between and among the selected variables. Analysis of records taken in the counseling sessions presented evidence that the prospective teachers were experiencing conflict, anxiety and identity stress suggesting that the possibility of finding measurable differences between counseled and noncounseled subjects remained.

Research pertaining to in-service education of home economics teachers is represented only by Monts' and Peterson's (1968) exploratory efforts to assess the effectiveness of using a combination of radio and telephone to conduct a graduate course in Home Economics Education. Experimental students, 14 full-time home economics high school teachers in a center 50 miles from the central campus, had no face-to-face contact with the instructors of the course. Nine students comprised a control group identically taught on campus though with instructors present. Students were not randomly assigned to control or experimental groups. Evaluation was based on: 1) a pre- and post-test using a projective technique with pictures where assessment of perceptivity in the pictured situation was in relation to quantity and variation of response rather than quality; 2) an analysis by instructors of recordings of class discussions by the cognitive level of student's contributions; 3) four written assignments; and 4) student reactions to the class and technique by which it was taught. Validity and reliability were not established for the evaluation devices.

Both instructors considered that the experimental students reached a higher achievement level than the control group though differences were small and significance of differences was not determined. There were mechanical difficulties in the experimental teaching which posed problems for both instructors and students; however students for the most part were favorably disposed to the course and the method of presentation used.

The possibilities for efficient preparation of teachers through the use of new educational media were examined in two studies and programed instruction in a third study. An exploratory study with seven student teachers was conducted by Bogniard (1968) to determine the feasibility of using simulation techniques for introducing home economics education students to student teaching. Twenty simulated experiences that incorporated the use of video tape, role playing, case studies, and written episodes for portraying high school home economics classroom management and communications were developed. Significantly positive changes were found in ability to perform and in teaching confidence. Faculty and students considered the program a highly acceptable method to use in pre-service preparation of student teachers.

Bell (1968) set up an experiment designed to determine whether students who, after student teaching, had the advantage of repeated opportunities of micro-teaching, viewing and criticizing the teaching episode, reteaching, and evaluating would do better as shown in a final micro-teaching episode than students who microtaught only one lesson pre- and one post-student teaching. Acquiring closure, establishing set, framing a reference, reinforcing and questioning were the skills under study.

Ten home economics student teachers (control) microtaught a single lesson pre- and post-student teaching. Twelve similar students (experimental) microtaught a single lesson followed by a cycle of micro-teaching, viewing and criticizing, reteaching with revisions, viewing again, and evaluating a different lesson each week for seven weeks. Six teacher educators (one a home economics educator) observed and judged pre- and post-student teaching microtaught lessons using the University of Illinois Teacher Performance Appraisal Scale. Teaching episodes were on video tape and students were not known to the judges as experimental or control, or pre- or post-student lesson. Scores for experimental students were significantly higher than those of control students for the final micro-teaching. Gain in scores from pre- to post-student teaching microtaught lessons was significant for experimental students; nonsignificant for controls. Reliability of the raters determined by analysis of variance was found to be .89.

Other studies related to the critical area of student teaching are those of Gritzmacher (1966) and Drobish (1966) who developed rating scales for appraising performance in student teaching (described in Evaluation section).

Units of programed instruction in eight areas usually taught in home economics professional education courses were written in a demonstration attempt to provide students with independent study opportunities prior to or during student teaching (Nelson, *et al.,* 1966). The home economics education departments of 20 institutions throughout the United States provided for field testing of the programs with numbers of students varying from 113 to 155 in each trial and with a minimum of three trials per program. Pre- and post-program criterion tests administered at the final trial indicated that the students made significant gains as measured by tests of knowledge and comprehension of the programed materials; reliability of the tests ranged from .66 to .86. Reactions of students and teacher educators to the programed materials were assessed by means of Likert-type inventories (student inventory reliability, .91). Data from 228 students and their teacher educators in 12 of the participating institutions showed neither teacher educators nor students to hold extremely favorable attitudes toward the programs though they tended to be predominately positive in their feelings toward teaching and learning by means of programed instruction. Attitude appeared to be unrelated to academic competence.

Experiences deemed valuable in preparing students for home economics teaching ranged widely. Cozine (1968) pointed to the need for the prospective occupational teachers experience in an entry-level job. East and Boleratz (1968) would add to this a concurrent living arrangement with a disadvantaged family. Cozine (1968) suggested the need for training in guidance for those preparing to teach in programs with wage-earning emphasis. Bogniard (1968) found simulation techniques prior to student teaching an efficient way of helping students become confident of their ability to teach. Bell (1968) demonstrated the efficiency of micro-teaching in home economics education.

Staffing Home Economics Programs

Concerned with the need for staffing high school home economics occupations classes, Lee (1966) sought to determine if teachers who were willing to teach wage-earning home economics differed significantly from those unwilling in certain factors relevant to occupational choice: 1) work values, 2) socioeconomic status of husbands and parents, and 3) the teacher's own work experience other than teaching.

Lee drew a sample of 144 individuals from a pool of high school home economics teachers employed during the 1964-65 school year in cities with a population of 100,000 or more, which had city supervisors of home economics. Findings are based on the responses of 102 teachers (70.83 percent of the drawn sample) to a Work Values Inventory and a Personal Data form which solicited information: for assessing the socioeconomic status of husbands and parents; concerning the teacher's own work experience other than teaching; and concerning the respondent's age, education, marital status, years of teaching, whether or not she was currently teaching wage-earning home economics and her willingness to teach wage-earning courses.

Thirty-five percent of the respondents were willing to teach courses which prepared students for employment in occupations that use home economics knowledge and skills. Forty-six percent indicated that, with in-service education to strengthen their qualifications, they would be willing to teach such courses. Nineteen percent were less willing to teach in a program with the wage-earning emphases.

The Willing group differed significantly (at the .06 level) from the Less Willing group in that a higher proportion of the Willing group held master's degrees, their fathers and mothers had a lower mean number of years of school completed, and in regard to work values they stressed intellectual stimulation more and prestige less.

Significant differences between the Willing and Willing With In-Service Education groups were in terms that the Willing group held a higher proportion of master's degrees, their mothers had a lower mean number of years of school completed, they were more likely to be currently teaching wage-earning home economics, and in regard to work values they stressed prestige less.

The With In-Service Education group differed significantly from the Less Willing group in regard to work values in that the With In-Service Education group stressed intellectual stimulation more.

No significant differences were found among the groups in terms of socioeconomic status of husbands, parental socioeconomic status as measured by occupation, the teacher's own work experience other than teaching, age, marital status, and years of teaching high school home economics.

May (1968) asked 33 state supervisors and 34 head home economics teacher educators in land-grant institutions to rate personality characteristics they considered important for teachers of homemaking and for occupational teachers based on categories of the California Psychological Inventory. Following this, the personality characteristics of 21 teachers of occupational training and 21 teachers of homemaking were assessed by means of the C.P.I. All were teaching in Oklahoma in the academic year 1966-67.

Professional models were established for both groups of teachers, comprised of characteristics which were deemed important by 75 percent or more of the raters. Ten of the same characteristics were common to both models. They were as follows: 1) sense of well-being, 2) self-acceptance, 3) responsibility, 4) self-control, 5) tolerance, 6) communality, 7) achievement via independence, 8) intellectual efficiency, 9) psychological-mindedness, and 10) flexibility. Two additional characteristics were included for the Professional Model, Homemaking Teacher. They were social presence and socialization.

Teachers of both types of programs scored above the mean established on the inventory for all characteristics except flexibility and social presence. Flexibility had been ranked high by the teacher educators and supervisors for teachers of both aspects. Social presence had been ranked high for the homemaking teacher only.

The t-test used for analysis of the mean score of each of the personality characteristics revealed no significant difference between the two groups of teachers who comprised the Secondary Teacher Sample. Neither the models established nor the test results showed differences in personality characteristics of the teachers of the two aspects of home economics which could clearly identify the persons who could do the best jobs in either area. A well-balanced, adequate personality appeared to be one of the requirements for effective teaching in both areas. It was suggested that some variable, other than personality characteristics might be more important as a determinant for job performance in the two areas.

Personality Characteristics of Teachers

Several investigators at The Pennsylvania State University became interested in Maslow's theory of the self-actualizing person and its relation to effective teaching and then conducted a series of studies based on this theory. Murray (1966) explored the relationship of self-actualization to teacher success. Her sample consisted of 26 home economics teachers in secondary schools in Pennsylvania, previously judged as having effective programs, and 2,333 of their students. Level of self-actualization was measured by E. L. Shostrom's "Personal Orientation Inventory" (POI). All the students of a participating teacher had completed (in 1961) Ray's "Student's Estimate of Teacher Concern" (SETC) which is based on a theory that teacher concern is composed of four factors—recognition, understanding, desire to help, and help given—and that students perceive their teacher's concern for them in these ways. The teacher's scores on the SETC (assumed to be a measure of successful teaching) were the grand mean of all usable questionnaires, as well as a mean for each grade level she taught. The number of students completing the questionnaires for each teacher ranged from 38 for one teacher to 208 for another teacher; the average number of students per teacher was 89.7.

Compared with POI norms, only two teachers were found who could be classified as truly self-actualizing on the basis of total POI scores. When the teachers were divided into two groups (the upper half referred to as more self-actualizing, the lower half non-self-actualizing) the more self-actualizing teachers were found to be significantly more successful (more concerned) as assessed by their students than the non-self-actualizing teacher. There were no significant differences in SETC measures across grade levels for the more self-actualizing teacher though there were for the non-self-actualizing. For the more self-actualizing teachers there was a significantly positive relationship between years of experience and students' assessment of teacher concern.

Continuing her exploration of self-actualization and its correlates, Murray (1968) examined students' perceptions of teacher concern in relation to teachers' level of self-actualization and social values (scores on social value scale of Allport, Vernon, Lindzey, "Study of Values"). Of 631 randomly selected home economics teachers teaching in Pennsylvania in 1967-68, 261 agreed to participate. Their students (793) responded to the SETC. From scores on Shostrom's "Personal Orientation Inventory" and from "The Study of Values", teachers who obtained extreme scores on the two instruments were compared: 1) five self-actualizing, 2) five non-self-actualizing, 3) five possessing high social values, and 4) five with low social values. The findings supported the hypothesis that self-actualizing teachers would be perceived by their students as more concerned than non-self-actualizing teachers. Teachers with high social values were perceived as more concerned than were teachers with low social values. The social values scores were better predictors of SETC scores than were POI scores.

When the total group of 261 teachers was split into two groups on the basis of their scores, it was found that self-actualizing and non-self-actualizing teachers did not differ significantly on social values although there were differences on other scales of the Study of Values. For the 261 teachers, the factors of teacher age and years of experience were unrelated to self-actualization, social values and student perception of teacher concern. In her earlier study (1966), Murray had found a relationship between years of experience and SETC scores for 13 self-actualizing teachers.

Wilhelm, (1968) also interested in self-actualization as a factor in teaching effectiveness, studied a sample of three self-actualizing and three non-self-actualizing teachers and 192 of their junior and senior students. She tested the hypotheses that teachers with higher POI scores would be perceived as more concerned by all their students than the teachers scoring lower would be by theirs and that high POI teachers would be perceived as more concerned by their low POI students than by their students scoring higher on the POI. Wilhelm concluded that the self-actualizing teacher is seen as more concerned with all of her students than the non-self-actualizing teacher is with hers (as much by the less self-actualizing as by the more self-actualizing students). The non-self-actualizing teachers were perceived as more concerned by their less self-actualizing than by their more self-actualizing students.

Smith (1968) investigated the relationships between two personality characteristics of home economics teachers, self-actualization and open-mindedness, and the teachers' perceptions of their use of teaching behaviors related to the development of student self-directed learning. Self-actualization was measured by scores in Shostrom's "Personal Orientation Inventory", open-mindedness by scores on Rokeach's "Dogmatism Scale". One hundred and sixty-four currently-teaching graduates (1957-1966) of The Pennsylvania State University responded to a Likert-type scale designed to measure the facilitation of self-direction (reliability, .91); all teachers had at least one year of teaching experience. The more highly self-actualizing teachers perceived themselves as using more teaching behaviors which encourage the development of self-directed learning among students than those teachers scoring lower on the self-actualizing scale. The more highly self-actualizing teachers were also found to be significantly more open-minded. These results were independent of number of years of teaching experience and number of years since graduation.

Structure of Home Economics Education

Home economics educators, recognizing the general usefulness of structure within a discipline as an organizing principle convened a seminar in 1964 sponsored by the University of Nevada and the Vocational Division of the United States Office of Education to attempt identification of a basic framework of competences and concepts for preservice teacher education (Dalrymple, 1965). At a second seminar held at the University of Nebraska, 1966, under the auspices of the U.S.O.E., most of the participants of the earlier seminar with 10 additional home economics teacher educators evaluated and refined the material. Further work at the seminar centered on the identification of a comparable structure appropriate for the content of graduate courses in home economics education. Suggestions for use of the structure identified were made and possible research projects outlined. Before disseminating the work of the two seminars, 36 home economics educators not involved in either the 1964 or the 1966 seminar reviewed the materials. Further work is needed on this identification of concepts forming a basic framework for pre- and in-service home economics teacher education.

In efforts to further the competence of home economics teachers in working with the disadvantaged and in developing and teaching occupational programs, workshops and seminars have been supported by funds provided under the 1963 Vocational Education Act. Such projects are reported by Gorman (1966), Hollandsworth and Barbour (1966), and Sulek (1967).

Institutes and seminars for home economics teacher educators have also been held. Reports by Gravatt (1965), Lee (1966), Garrett (1967) and Hill (1967) contain descriptions of the programs offered and results of various types of evaluation carried out.

Summary

A search for significant relationships of personality factors to effective teaching has brought some indications that the characteristic of self-actualization is related to success when success is assumed to be student perception of teacher concern for him or when the effectiveness criterion is teacher perception of her use of methods encouraging student independent learning. Difficulty in finding fully self-actualizing teachers as measured by the instrument used raises the question as to whether difference in self-actualization is a relevant variable to use in effectiveness studies. An effort to find a reliable predictor of effectiveness was not successful; the method used in the study reported seems worth more trials. Studies designed to predict teacher effectiveness generally have not been successful and indications are that research in the area of measurement, effect, and development of specific teaching behaviors would be more rewarding.

Positive results were found in the use of micro-teaching in preparing students for home economics teaching. Programed instruction in professional home economics education was found acceptable by students and teacher educators; students did learn the course content by means of the programed materials. A structured experience with the life and work of the disadvantaged was found feasible and desirable for inclusion in the preservice education sequence.

Teachers willing to teach or already teaching home economics occupational classes are not much unlike teachers of the more traditional home economics classes nor do teacher educators believe there are major differences in personality characteristics desirable for teaching the two different types of programs. Research in this area, however, did not touch upon the question of need for differences in skill-oriented classes in the teacher-preparation program or amount and kind of work experience needed.

The documents structuring professional home economics education produced by teacher educators at the Nevada and Nebraska conferences demand further exploration and validation if they are to be useful for the purpose for which the work was undertaken.

ADMINISTRATION AND SUPERVISION

Nine studies were selected from among those available for review pertaining to administration and supervision. Four were concerned with the supply of home economics teachers; four focused on various facets of the supervision of home economics programs; one surveyed administrator's problems in home economics departments of Catholic liberal arts colleges.

Conclusions from reports of the past several years covering all vocational teacher supply and demand indicated the supply of home economists in education was fairly well balanced, though with selective shortages. A survey by the New York State Education Department (1965) reported New York State as one of the areas of shortage. For the period 1964-1969, administrators responding for 82 percent of the state's 783 school districts foresaw a need for

500 replacement teachers and 497 new teachers. Two studies of conditions in several southern states (Shootes, 1965; Beasley, 1968) found imbalance in the direction of oversupply.

Shootes studied the employment situation of Negro home economics graduates from five selected predominantly Negro educational institutions (Atlanta University, Florida A&M State University, Grambling College, South Carolina State College, Tuskegee Institute). Questionnaires were sent to graduates (1959-1960, 1960-1961); responses indicated that there was serious underemployment among them. Lack of adequate sources of professional information was thought to contribute to the underemployment; curricular shortcomings which varied among the institutions represented were believed to affect adversely home economics graduates' capacity for satisfaction in positions.

Beasley examined the professional status of all the graduates of the 10 Alabama institutions offering home economics teachers preparation programs. A questionnaire mailed to 1277 graduates brought usable replies from 613. Though demands for new graduates of home economics to fill secondary teaching positions in Alabama seemed to be decreasing, graduates readily found positions at a professional level. Only 27 percent were teaching vocational home economics the year following graduation, though 84 percent of the total number of graduates were teaching or employed in other professional jobs. Overall, Beasley predicted from published reports and State Education Department records that the demand was unlikely to equal the supply of trained vocational home economics teachers.

Lee's findings (1966) should help to allay concerns of administrators for staffing home economics occupational programs. She found that presently or with the strengthening of their qualifications by in-service education, 81 percent of her sample of city home economics teachers would be willing to teach courses which prepare students for employment.

Staffing at the college level was seen as a problem, however, in the home economics departments of Catholic liberal arts colleges. Accreditation proposals of the American Home Economic Association were expected to present problems if accreditation criteria being considered were met (Griffith, 1966). Administrators representing all Catholic colleges offering home economics (71) were queried with an 82 percent return on the questionnaire. The largest enrollment was found to be in the teacher preparation program though even these enrollments were considered low enough per college to be a problem. The major problem foreseen in meeting proposed accreditation standards was in relation to faculty. Sixty-one percent of the colleges had only two or three home economics faculty members. The majority of the faculty were teaching in their subject matter specialization but they were teaching also in one or more areas for which they were unprepared. Forty-two percent were teaching in more than two subject areas to as many as five areas for seven of the faculty members. Fifty percent of the faculty members teaching in all areas of home economics in the Catholic liberal arts colleges had their highest degree in home economics education.

Four researches concerned various facets of supervision in home economics programs. Principal investigators at four institutions sought a broader base for generalizability of findings by cooperatively studying the contribution of the college home economics supervisor to the student teaching situation (Dirks *et al.*, 1967). Subjects for the study consisted of all of the college supervisors, supervising teachers and student teachers who were actively engaged in the student teaching program during 1964-65 in each of the four cooperating institutions. Student teachers, college supervisors and cooperating teachers supplied approximately 480 reports describing their observations of college supervisors' behaviors which they believed to be critical to effective or ineffective performance. Categorization of incidents and subsequent chi-square analysis indicated that college supervisors mainly performed roles seen as information and judgment giving and stimulating growth. Student teachers and supervising teachers alike perceived these behaviors to be unique, important and necessary in many student teaching situations. Need for supervisory action was noted most likely to arise in the areas of teacher self concept, lesson planning, program policies and requirements and rapport with supervising teachers.

Williams (1966) and Adams (1968) dealt with roles of college supervisors and supervising teachers in the secondary school. Williams' research focused on clarifying the role of the home economics college supervisor through the interpretation of specific comments made about her action or behavior and indirectly from expectations of her in the role. Data were secured through free-response questionnaires from 104 home economics student teachers, 112 supervising teachers and 31 college supervisors from 12 states in the central region of the United States. Respondents provided answers to the following questions: 1) what did college supervisor do that was helpful? 2) what should the supervisor have done that she didn't do? 3) what phase of supervision was done ineffectively? 4) what could have been done equally well by supervising teacher as by the college supervisor? Percentages of responses falling into each of several categories were compared and significance of differences determined by chi-square. Originally planned for analysis of matched teams of three, non-response of one of the three team members reduced members of matching triads to 44 (42 percent of total). An additional 15 student teacher responses were able to be paired with answering college supervisor or supervising teacher. The Dirks, *et al.*, (1967) cooperative supervision study similarly found relatively few instances where two or more persons closely involved in a situation did not see (or saw but did not report) an incident as important. A possible explanation is that frames of reference varied with the roles of the different observers.

When team data were examined, student teacher, college supervisors and supervising teachers had not mentioned the same things either with respect to help given or help desired; pairs showed more similarity than did the triads. There were significant differences between some actions of the college supervisor as identified in the help given and expectations of her in the role. Only some of the college supervisors' functions were seen to be performed equally as well by the high school supervisors studied. This is somewhat similar to findings in the cooperative supervision study (Dirks, *et al.*, 1967) when two-thirds of situations reported were seen as requiring intervention by the college supervisor. Williams concluded further research is needed on college supervisor role clarification.

Adams (1968) developed a "Measure of Supervising Teachers' Role Perceptions" from items extracted through factor analysis from a longer device in previous use at the Pennsylvania State University to examine the relationship of professional commitment to perceptions of the supervisory role (reliability, .87). Supervising home economics teachers (169) in secondary schools in the southwest region and a subsample (20) in Alabama were tested on the role perception device and on the Loftis "Measure of Professional Commitment." Personal data such as age, marital status, teaching experience were also collected. The more committed teachers were found to perceive role fulfillment to be less difficult than did less committed teachers. Age and marital status, though not teaching experience variables, were significantly related to scores on the commitment scale and on the role perception instrument. Those teachers aged 31-50, had higher commitment scores than did those 30 and younger or 51 and older. No significant differences were found between the main and sub-populations' commitment and role perceptions scores.

Reed (1968) surveyed city supervisors of home economics to identify responsibilities and functions carried out in the supervisory position and to determine which activities supervisors believed most important. A random sample consisting of half of all city home economics supervisors in the United States listed by the U.S.O.E. was drawn (N=142). Ninety percent of the sample (representing 26 states) replied to the forced-choice inventory used to furnish data regarding functions and activities of city supervisors. The inventory, previously validated by college faculty and seven city supervisors, was analyzed in terms of frequency and mean scores. The mean number of years of service as a supervisor was nine; the mean number of teachers supervised under the direction of one supervisor was 40, with mean number of schools 16. Over 80 percent of the supervisors held a master's degree.

Rankings of their functions in order of importance gave first, second and third place to curriculum development, in-service education and evaluation respectively. Research was ranked last of 10 functions. Supervisors saw their most important activities, of the 10 functions presented, to be giving leadership to curriculum development, motivating teachers to keep abreast with changes in the field of home economics and planning for continuous evaluation of existing programs. Activities considered least important included those related to home visits, judging at fairs, work with Future Homemakers of America programs, planning and implementing adult education programs and developing wage-earning and vocational educational programs.

Summary

Two aspects of administration and supervision were presented in the investigations selected for this review. For the most part information relative to staffing at the secondary level suggests home economics does not share in the present or expected severe shortages that face the majority of vocational services. In view of the underemployment of Negro teachers found, special effort needs to be made to fully employ professional competence of those being trained. Staffing was seen as a problem in Catholic liberal arts college departments of home economics. Of the four studies reported which were conducted relative to supervision in the home economics program two were similar in focus. Both of these provided evidence that the college supervisor of home economics performed a unique and needed role in the preparation of home economics teachers. The modest cooperative study, successful in producing clear-cut results, more importantly demonstrated possibility and desirability of cooperative research in home economics education across states and institutions.

EVALUATION

Studies reviewed in this section include evaluations of programs and staff, and construction and field testing of instruments.

Program Evaluation

Evaluation of occupational courses, including the follow-up of students, was carried out at several levels of complexity and numbers of students involved. The three reviewed here are illustrative. In one study, 60 individuals who were graduated between 1965-1967, and who had been trained in the waitress and food handling course of a single institution were followed up after leaving high school; 56 of them were interviewed. Twenty-nine were currently employed (22 in food service); 22 were unavailable for jobs (full-time homemaking, sever; post-high school education, 11; armed services, four); and only two could find no employment. Three reported they had no desire to work. Employers of the 22 graduates in food service jobs provided ratings of their workers; most of the ratings referred to the quality of their work. Employers stated that the individuals' relationships and their attitudes toward work were excellent or satisfactory; a few were rated average; very few were rated unsatisfactory (Miranda, 1968).

Howell (1968) investigated selected aspects of home economics job training programs in Ohio high schools as a basis for determining guidelines for program improvement. Data (questionnaires and telephone interviews) were obtained from all graduates (N=169) of 1966 and 1967 home economics job training programs and from 46 employers of currently employed graduates. Eighty-four percent obtained employment (10 percent sought no employment); half of these were working at training-related jobs. Those girls who were in jobs related to their training were superior to those in jobs not related to their training with respect to skills required for the job, communicating with employer, and using equipment properly. About half of the 46 employers contacted made suggestions to the investigator about certain concepts of the training programs. The employers felt that such programs should help the students develop: 1) human relations skills, 2) a sense of responsibility to the job and place of employment, 3) ability to follow instructions, and 4) a realistic understanding of the tasks involved in a job.

Following a pilot study of a single home economics occupational course training entry-level workers for food service jobs (reported in Chadderdon and Fanslow, 1966), two studies closely related in focus and method were carried out in New York State. One project evaluated programs planned to train students for entry-level jobs in food services and child care services (Nelson and Jacoby, 1967); the other replicated the process and assessed programs preparing students for entry-level jobs in health care services related to home economics (Nelson and Jacoby, 1968). Classes of both projects were comprised of students (N=138; N=313) ranging in age from 14 to 19 with the majority 16 and 17 years old; food services classes enrolled both girls and boys. A majority were characterized by low ability levels and low reading and numerical competence as measured by Stanford Achievement tests. Many were considered by their guidance counselors to be handicapped by poor physical or emotional health or by deficiencies in their cultural backgrounds. On the whole, socioeconomic status of the students ranged from that of family on welfare to that indicated by such occupations as laundress, truck driver, factory assembler. The 28 classes used in the study were located in vocational schools, small city schools, New York City schools and suburban schools.

Data were furnished by pre- and post-course tests, ratings and scale scores; from interviews with students; and from information provided by employers in a follow-up of the students six months after completing courses. Analyses of the data included developing an index of success by ranking students (within each class) by post-course scores on several instruments, then student rank on index compared with such variables as amount of supervised work experience, academic achievement, measures of factors motivating toward class enrollment. Variables found to be related to the index of success varied among the 28 classes. Most often found related were self-confidence, a realistic concept of self in the world of work, an accepting attitude toward school, academic ability and attitude toward working with others.

Significant positive changes between pretest and post-test scores were noted most often for achievement tests, employability ratings, interest in occupational training, and attitude toward work.

Four correlation matrices were constructed, one for each of four samples: 1) all students in food service and child care service programs from study one, 2) health careers group, 3) dietary aide group, and 4) nurse's aide group from study two to explore relationships among variables. These differed among the samples. Findings of particular interest to occupational teachers and guidance counselors included the following: 1) follow-up status and hourly wage on jobs, success on the job as measured by employer ratings, and employee satisfaction with job were not related to evidences of academic ability; 2) teachers and employers tended to rate students' occupational skills similarly; and 3) scores on attitudes related to the world of work were related significantly to ratings of occupational skills.

Dropouts were comparatively few (i.e., 26 of 138 or 19 percent in study one and 64 of 313 or 20 percent in study two) when one considers the academic ability levels of the students and the number of students placed in the courses by counselors who recognize that the programs are a last attempt to keep potential dropouts in school. Replies to follow-up communications were received from 88 percent of those completing the courses. Of these, over half were satisfactorily employed; not quite a fifth did not seek jobs; giving age or help needed at home as reasons; nearly a fourth looked for jobs but were unable to find them largely because employers considered them to be young or they were in the sample of students in one health careers course that had not trained for a specific job. Only six of the respondents said they were enrolled in post-high school formal education programs.

Two investigators evaluated programs which recruited and trained women from low income families to work as program aides. Home economists in the Alabama Cooperative Extension Service developed and evaluated methods and materials to use in teaching home economics skills to low income young homemakers (Coleman, Priester, Robertson, no date given). Among conclusions reached at the end of a five year program tested in a variety of ways were: 1) sub-professional program assistants trained and supervised by home economists can conduct successful programs for hard-to-reach young homemakers; 2) low-reading level, one-idea publications, with clearly illustrated steps and supported by program assistants telling, showing and doing are effective ways to teach basic homemaking activities to low income young homemakers; 3) program assistants need much training in subject matter, methods of teaching and evaluation and making reports; and 4) they also need much supervision.

An informal evaluation of a program that has implications for home economics occupational training is that by Walton (1968) of a program funded by the Office of Economic Opportunity. Women from low-income areas were trained to serve as paraprofessionals in New York City community service agencies (i.e., schools, hospitals, and settlement houses). The program furnished its own training in classroom work and coordinated on-the-job experience. Former professionals served as coordinator-teachers working with trainees both in the classroom and in the field. Of 120 women accepted in 1966-67, 113 completed 30 weeks of training and were placed in permanent jobs. Evaluation for the first year of full operation, 1966-67, was made possible by the collection of placement data and information gathered by questionnaires and telephoned responses of 111 of the total 113 trainees who completed training.

Approximately two-thirds were placed in schools as teacher or guidance assistants; one-third were accepted on jobs in other community agencies as social workers, researchers, occupational and recreational therapy assistants, and as mental health workers. A follow-up three months after the last group and completed training revealed 98 were employed, and two enrolled in college full-time. Reasons given by the remaining 11 for their unemployment were: child care problems, ill health, full-time study for high school equivalency certificate.

Walton found that salaries for trainees ranged from $2,100 (part-time) to a high of nearly $9,000. However, the annual income for the majority of the paraprofessionals was $3,000 or less since nearly two-thirds of those who had been trained were employed in schools earning hourly rates ranging from $2.25 to $2.50. Twenty-one of the respondents hoped to enter college at a later date; 17 were currently working for high school diplomas.

A result of the program was the establishment of a community college specializing in education for human service occupations, fulfilling the need for an institution that would permit continued advancement of paraprofessionals of limited education and financial means.

A job performance evaluation of a staff of professional home economists working with low-income families in Louisiana was carried out by Patsy Alexander (1968). Program specialists used a rating scale to evaluate the trainees based on recognized steps in program planning, adaptation of programs to known low-income families' needs, subject matter areas recognized by the American Home Economics Association; and educational methods familiar to any extension worker. Only 16 percent of 84 home economists assigned primarily to adult work rated as high job performers. Approximately half were thought to be doing a good job and about a third seemed to be performing below average. The high performers appeared to be between 50 and 59 years of age, had worked from 11 to 20 years in extension. There were no striking differences among performers at the three levels as to training at either formal course work or informal agent-training level. The amount of experience of an agent in working with ethnic groups other than her own appeared to be related to her effectiveness in working with low-income groups. According to supervisory personnel queried, the greatest need in the process of training all home demonstration agents serving advantaged as well as disadvantaged groups is in improved methods of evaluation.

Instrument Development

As part of the evaluation of a conference for home economics teachers on program development for disadvantaged youth and their families, Ray and Phillips developed an 80 item test of knowledge of and attitudes toward the disadvantaged (reported in A.E. Gravatt, ed., Conference Proceedings, 1966). The instrument consisted of positive and negative generalizations in a true-false format with a scale of reaction to the generalizations indicating the degree of certainty or confidence of response. Twenty-five items deal with knowledge of working with disadvantaged individuals or families; 40 pertain to general knowledge judged to be of value to individuals working with the disadvantaged; 15 present attitudes toward working with children of the disadvantaged in a teacher-pupil situation.

The pre-conference reliability of the instrument, estimated using the analysis of variance technique, was .887 total test. Sub-test reliabilities were .725 for items related to the disadvantaged, .841 for the general items, and .692 for the attitude items. A correlation of .237 between knowledge of the disadvantaged and attitude and .385 between general knowledge and attitude indicated that the sub-test on attitudes represented a dimension apart from either of the two knowledge sub-tests. Mean changes in knowing and in attitude were small when raw score without a confidence weighting was used as a criterion. However, the use of the certainty response to provide a weighted score revealed that highly significant changes took place in the group tested.

In a doctoral study, Phillips (1965) developed a test designed to measure cognitive outcomes of teacher education programs in home economics education. The 100-item instrument centered around five unifying and integrating concepts in home economics (i.e., development, family, management, motivation, relationships) and four key concepts in education (i.e., adolescence, curriculum, teacher concern, professional commitment). Its content validity was affirmed by 18 persons trained and active in one or more of the areas tested. The test was administered to 352 senior home economics education majors in nine state universities considered to have quality undergraduate programs in home economics education; test quality statistics were determined using a weighted score comprised of the sum of the certainty weights assigned to correct responses. Mean item difficulty was .55 with 87 percent of the items within a difficulty range of .20 to .80; 92 percent of the items had a significant positive correlation with the total score and 93 percent with the subtotals of their respective parts; reliability assessed by means of analysis of variance was .87.

Drobish (1966) revised a rating scale used for home economics student teachers at Purdue University which resulted in a 24-item instrument, "The Evaluation of Student Teaching Performance", with an inter-rater reliability, demonstrated with five college supervisors, 38 supervising teachers and 35 student teachers, of .72.

Gritzmacher (1967) used the critical incident technique to provide a valid base for a descriptive rating scale for home economics student teachers. She formulated a first-stage scale of 112 items from 550 reports of 958 critical incidents supplied by college supervisors, cooperative teachers, and student teachers. Field testing by a self-selected sample from institutions in 14 states produced 399 ratings on the first-stage scale. Subsequent regression analyses and further field testing with a different sample (276 ratings) produced a 35-cell scale providing for rating, those behaviors found to be critical in student teaching performance. Specific qualities of the scale as used in its final field testing include: split-half reliability, .96; inter-rater reliability, .65; validity coefficient (with student teaching grades), .78

Tested instruments, useful beyond their specific project data-gathering purpose for further research or in the classroom, were produced for several studies reviewed for the present reporting period. A major feature of the Nelson and Jacoby (1967; 1968) program evaluations was the development of instruments to measure progress of students toward objectives of occupational home economics programs: knowledge, job competences, attitude toward and interest in job responsibilities. The pilot study and the two subsequent larger studies produced the following instruments: a series of four descriptive rating scales applicable to many entry-level jobs to measure general employability, management, safety and sanitation on the job; descriptive rating scales to measure specific skills needed by the nurse's aide, child care center aide, dietary aide, short order cook, waitress and cafeteria counterman; tests of knowledge related to the specific jobs and to the work in general; descriptive rating scales to measure an employee's satisfaction with a worker and to measure the worker's satisfaction with his job. All tests and rating scales were validated by lunchroom managers, supervising dieticians, hospital supervisory personnel, nursery school directors, etc. as appropriate. Pre-testing established inter-rater reliability range of the scales from .75 to .92, reliability range of the achievement tests from .68 to .82.

Guttman scales developed for the projects and used to measure attitudes toward school, self-confidence, and attitude toward working with others had acceptable coefficients of reproducibility and scalability. Likert-type scales were developed to measure attitudes toward work (reliability, .88) attitude toward health service jobs (realiability, .93) and concept of self in the world of work (reliability, .88).

The Horn project (1966) produced tests in child development and in clothing with items of good discriminating ability and difficulty range at three Taxonomy levels (Cognitive Domain). These have had wide testing with numbers of subjects ranging from 300 to 1200 depending on the grade level tested.

For her curriculum package, Hughes (1968) produced two equivalent forms of an achievement test measuring knowledge and understanding of the dual role of homemaker-wage earner and an attitude scale related to the same concepts. Both use items at seven levels and sublevels of the Taxonomy of Educational Objectives, Cognitive and Affective Domains. The Blackwell and Green research (1969) produced a measure of normlessness: the expectancy that unapproved behaviors are required for achieving desired outcomes. Adams (1968) developed a measure of the supervising teachers' role perception.

Summary

In general the evaluations of occupational programs pointed out that students *were* trained, *were* placed in jobs, and *did* satisfy employers, even when students were of limited ability. In addition such programs were an aid in retaining students in school. Tentatively, in the absence of more rigorous evaluation of programs involving paraprofessionals, it can be concluded that women from low-income groups can be trained and can function as aides to professionals. A study of performance of home economists in extension programs pointed out need for attention to training for the evaluation function of their jobs.

Several instruments useful for research or classroom purposes have been carefully developed and tested.

RESEARCH

Chadderdon and Fanslow in the 1966 *Review and Synthesis of Research in Home Economics Education* pointed out that, although the amount and quality of educational research related to home economics was increasing, the need to improve both was clear. A number of problem areas were noted and avenues to possible improvement were suggested. In preparing this second review and synthesis, special attention was given to the extent to which the studies of the past three years reflected responsiveness to the several suggestions.

Avenues to Improved Research

Chadderdon and Fanslow pointed out that one way to improve research in home economics education might be through cooperative effort among institutions. Research representing the efforts of researchers at several institutions was that of Dirks, Elliott, Lowe, and Nelson (1967) carried out at The Ohio State University, the University of Missouri, Purdue University and Cornell University investigating the contribution of the home economics education supervisor to the student teaching situation. Many institutions were represented in the cooperative effort at concept structuring of home economics education curriculum reported by Dalrymple (1965) and by Kreutz and Anthony (no date given).

Among studies currently in progress are two which utilize the capabilities of research personnel at several institutions. Cross (University of Georgia), Gorman (for the University of Kentucky), Loftis (Winthrop College), and Ridley (Florida State University) are investigating the effectiveness of full-time homemakers and homemakers who are also full-time employees. Three institutions (i.e., Ohio State, Purdue and Cornell) under the direction of Dalrymple, Lowe and Nelson are presently engaged in a developmental project concerned with the efficacy of home economics courses designed to prepare disadvantaged pupils for their homemaker-family member role and the dual roles of homemaker and wage earner.

Cooperative research within an institution was suggested as a possible means of improvement. The reporter found no completed studies jointly undertaken by investigators in several departments or colleges within an institution. However, studies are currently underway at Iowa State University involving researchers in the home economics education department and in the department of institution management. Projects include one testing programed learning as home study for school lunch workers. Another is underway at Cornell University under the direction of Nelson and Yerka which combines the efforts of home economics education researchers and researchers in the department of human nutrition and food. The project is one of evaluating the effectiveness of training programs of nutrition aides with special emphasis on the effectiveness of the aides as teachers.

Qualified personnel was pointed out by the two previous reviewers as a need, if research in home economics education were to continue to show improvement. Home economics education researchers have availed themselves of opportunities to upgrade their research competence. They have been represented among the attendees at research seminars sponsored by the U.S. Office of Education and The Center for Vocational and Technical Education (Ohio State) and the Center for Occupational Education (North Carolina State). They have also participated in American Vocational Association pre-sessions sponsored by The Center for Vocational and Technical Education and at pre-sessions at the American Educational Research Conference.

The funding of research projects in vocational education has provided the opportunity for home economics students to work alongside faculty in meaningful and stimulating research. Such training seems to offer more possibility of gaining the needed research competence than that gained through the necessarily limited self-supported master's or doctor's thesis. The advanced degree candidates of today are tomorrow's research leaders; the vigor and sophistication of their research depends on today's opportunities for training.

Problem Areas

Chadderdon and Fanslow pointed out areas to which researchers might well turn their attention. Those aspects which they believed most in need of work included: 1) extended use and revision of data-gathering instruments, 2) replications of studies, 3) studies directed at relatively unexplored aspects of home economics education research, 4) pilot studies, 5) evaluation of state programs, 6) studies relating especially to wage-earning programs, 7) research based on theory, and 8) improvement in research design and statistical analysis. Most of these areas still demand attention although the research presented in this review represents forward steps in each problem area.

Of the needs pointed out, only that pertaining to the paucity of research in occupational training was met to any considerable extent. Research aimed at job identification, motivation of trainees, knowledge and abilities required for selected jobs, attitudes toward employment, job descriptions, follow-up of graduates of training programs, worker-traits conducive to success and other research related to occupational home economics is well represented (Beaver, 1967; Bert, 1967; Carpenter, 1968; Cozine, 1968; Dewar, 1966; Dowell, 1967; Fetterman, 1966; Flanagan, 1968; Howell, 1968; Lee, 1966; 1967; May, 1968, Miranda, 1968; Nelson and Jacoby, 1967; 1968; Ridley, 1967; Robinson and Agan, 1966; L. Robinson, 1968; Rollings, 1968; Scruggs and Souder, 1966; Shipley, 1967; Smalley, 1968; Sulek, 1967).

Lack of a theoretical base was noted for many of the research reports examined for the previous review. This is still a valid criticism though several included in the present review represent research formulated in terms of theoretically cogent approaches. Such are illustrated by the research on anomie (Follender, 1966; Green, 1968; Blackwell and Green, 1969); by the Taxonomy-based research (Thomas, 1965; Mehaffey, 1967; Zavacki, 1968; Hughes, 1968); by the work on self-actualization as related to teacher effectiveness (Murray, 1966, 1968; Smith, 1968; Wilhelm, 1968). These researches also demonstrated the sustained attack made possible when a number of researchers worked through a problem together or in a series. The researches of Boleratz (1967), Ray (1968), MacNeil (1968), and Campbell (1969) should also be noted as theoretically based.

Chadderdon and Fanslow found relatively few studies in 1965 in which new approaches were tried and pointed out a need for greater creativity in finding solutions to important problems. Creative approaches to problems in teacher education are illustrated in the present review by the exploratory study of Monts and Peterson (1969) on in-service teacher education by means of telephone; by the inclusion in preservice education of an experimental experience with the life and work of the poor (East and Boleratz, 1968); by Bogniard's exploratory use of simulation techniques prior to student teaching (1968). Gilbert's (1966) attempt at clinical prediction of teacher effectiveness might also be cited.

Robinson and Agan (1966) demonstrated a creative approach in their team teaching of the commonalities in occupational education. The study made by Ebert (1967) represents a tentative first step in moving toward a curriculum planned to be of maximum usefulness to the educable mentally retarded pupil in home economics. Scruggs and Souder (1966) should be mentioned as pioneering in a field important for curriculum planning and for guidance and counseling: the interrelationship of home environment and employment. Lattes-Casseres (1968) and Miller (1969) experimented with the use of simulation games aimed at interesting students—in particular the slow learners—in the work of the classroom.

Extending the capabilities of professionals through the recruitment, training and use of paraprofessionals might be a possible solution to a long-standing problem. The studies by Walton (1968) and Coleman, Priester, and Robertson (no date given) make a tentative exploration of this area.

Evaluation of state programs remains a concern. The current review found little done in this area. The studies of Nelson and Jacoby (1967; 1968) were an effort to evaluate newly initiated occupational home economics programs in New York State. At the national level, the Jung (1966) study is one of several undertaken to evaluate the Future Homemakers of America program.

The previous reviewers considered that replications of studies are needed. Representing a response to this, the present review offers as replicates only the wage-earning researches by Nelson and Jacoby (1967; 1968), the Taxonomy-based studies of Mehaffey (1967) and Zavacki (1968) and the Follender study (1967) a replication of a part of the larger Green (1968) study.

Chadderdon and Fanslow saw pilot studies as a needed (but an infrequently done) aspect of research in home economics education. The present review includes a number of researches considered preliminary to a larger investigation providing clarity of conceptualization of the problem under study and a runthrough on procedures. Such studies are represented by Cozine's work on gainful employment in home economics (1968), by Scruggs and Souder's investigation of the interrelationship of home environment and employment (1966) and Gilbert's trial of a clinical evaluation of predictive data for prospective home economics teachers (1966). Hughes (1968) incorporated a pilot study leading into her project testing the postulated hierarchy of the *Taxonomy of Educational Objectives: Cognitive Domain.*

Need for further development of evaluation instruments produced for research studies continues to be true in general although for those instruments developed in researches reviewed in the Evaluation section extended efforts toward refinement.

There is evidence in the studies reviewed of recognition of the need for random sampling or for broadly based samples where randomization was not possible (e.g., Horn, 1966; Bert, 1967; Boleratz, 1967; Gritzmacher, 1967; Ridley, 1967; Blackwell and Green, 1969). Investigations utilizing the sophisticated statistical analyses called for in the 1965 review are represented in large numbers of the present collection. However, among the numerous studies read for the present review many could be criticized on the basis of their minimal generalizability and many could be faulted for inadequate design and statistical treatment.

Home economics education research was reviewed for the October 1968 issue of the *Review of Educational Research.* A new format in this review provided for an integration of the research in home economics education with that from all vocational, technical, and practical arts education. Eight home economics education researches were cited for the five year period covered in that review, a number which does not seem to be a valid index of the contribution of home economics education research to the total field of vocational and technical education. Home economics education studies comprised approximately a fifth of the researches in teacher education cited by Moss (1967) in his *Review of Research in Vocational Technical Teacher Education.* Nelson (1969) authored an article on home economics that appears in the fourth edition of *The Encyclopedia of Educational Research.* Since 1966, abstracts of master's theses and doctoral dissertations completed in graduate schools of home economics have been compiled regularly by the American Home Economics Association (Mather 1966; 1967).

CONCLUSIONS AND RECOMMENDATIONS

The previous section has pointed out the extent to which research of the period 1965-1968 has gone in directions outlined in the 1965 review and synthesis. Improvement has been seen. However, home economics education, as does all education, continues to need research based on theoretically-derived hypotheses, which is carefully designed and utilizes appropriate treatment of data. Emphasis on long-range research programs focused on significant problems of scope and depth with successive studies integrated into a larger whole is a necessity. Within the long-range programs there should be provision for preliminary exploration studies, frequent replications, and perfection of measuring instruments which facilitate replication attempts.

In order to accomplish needed research it seems necessary that there be an increase in the amount of time home economics educators can devote to it. Uninterrupted blocks of time are a must for one who would produce imaginative ideas for solutions to problems and clear conceptualizations, formulate testable hypotheses, and think through sets of feasible procedures. Continual opportunities for home economics educators to upgrade their research competence is also needed.

Suggestions for future research that will help to fill gaps in home economics education include the following:

- A series of longitudinal studies in which a sample of teenagers would be followed through occupational training and into the world of work
- Study of the length and sequence of observation and work experience in home economics occupational programs
- Investigation of efficient ways of getting teachers prepared to work in occupational home economics programs
- Longitudinal studies of career patterns for girls; the differences in vocational development between girls and boys
- Continued study of the relationship of home environment to success in employment
- Building curricula for the disadvantaged with systematic and thorough evaluation in the field to assess impact of materials and methods
- Development, production, field testing and evaluation of flexible modules of curriculum (i.e., learning resources designed and produced concurrently with small cores of objectives, concepts and generalizations and evaluated with criterion referenced tests)
- Studies of optimum sequence of learning
- Research on the long-term effects of curricula in homemaking, consumer education and occupational training
- More emphasis on program evaluation
- Continued research on characteristics and needs of learners
- Research focused on the selection, training, and effectiveness of paraprofessionals in home economics
- Identification of specific competencies in observable, measurable performance terms needed by home economics teachers and teacher aides; differentiation between competencies needed by teacher and aide; and further differentiation among competencies needed by teachers and aides for work with different age groups, different social groups and for different purposes
- Testing the effectiveness of various kinds of teacher education procedures for developing specific teaching competencies
- Further validation and standardization of instruments already developed
- Replication of studies.

BIBLIOGRAPHY[1]

(Boldface type indicates pages which cite the reference)

Adams, Eva Walker. *Supervising Teachers' Perceptions of Their Roles and Degree of Professional Commitment.* Doctor's Thesis. University Park: The Pennsylvania State University, 1968. 128 pp. **40, 41, 47**

Agan, Raymond. "Vocational Guidance is Stressed." *Kansas State Teacher* 75:25-27; May 1967. 7

Alexander, Patsy Ruth. *The Relationship of Selected Factors to Job Performance of Louisiana Home Demonstration Agents in Working with Low-Income Families.* Doctor's Thesis. Stillwater: Oklahoma State University, 1968. 121 pp. **16, 45**

Beasley, Mary C. R. *Investigation of Professional Status of Home Economics Education Graduates as a Function of Supply and Demand.* Doctor's Thesis. University Park: The Pennsylvania State University, 1968. 132 pp. **39**

Beaver, Sylvia Wade. *Home Economics Related Occupations Grouped by the Clustering Technique.* Master's Thesis. Tallahassee: Florida State University, 1967. 63 pp. **7, 13, 49**

Bell, Camille G. *A Report of an Investigation of Microteaching in the Development of Teaching Performance in Home Economics Education at Texas Technological College.* Texas Technological College, Lubbock. 1968. 28 pp. **32, 34**

Bert, Clara Virginia. *The Educational and Occupational Aspirations and Expectations of Adolescent Girls in Florida.* Doctor's Thesis. Tallahassee: The Florida State University, 1967. 234 pp. **13, 23, 26, 49, 51**

Blackwell, Sara and Green, Mary E. *Anomie and Socioeconomic Status Among Adolescents.* Project No. 5-0156, Contract No. OE-6-85-015, U.S. Office of Education, Bureau of Research, 1969. 236 pp. **23, 25, 47, 49, 51**

Bogniard, Jane Nutter. *The Development and Use of Simulation Techniques in a Pre-Service Program for Prospective Student Teachers.* Doctor's Thesis. Columbus: The Ohio State University, 1968. 167 pp. **32, 34, 50**

Boleratz, Julia M. "Learning by Discovery: An Experimental Study to Measure Its Effectiveness for Teaching Value Concepts." *Journal of Experimental Education* 36:13-21; Winter 1967. **11, 18, 20, 50, 51**

---

[1] Bibliographical entries followed by an ED number in parenthesis are generally available in hard copy or microfiche through the Educational Resources Information Center (ERIC). This availability is indicated by the abbreviations, MF for microfiche and HC for hard copy. Order from ERIC Document Reproduction Service (EDRS), The National Cash Register Company, 4936 Fairmont Avenue, Bethesda, Maryland 20014. For all orders, add $0.50 handling charge and sales tax appropriate to the state where the order is originated. Foreign orders must be accompanied by a 25 percent service charge, calculated to the nearest cent. Payment must accompany orders totaling less than $5.00. Items with ED numbers only are available from the publisher. Dissertations are usually available from University Microfilms, Inc., Ann Arbor, Michigan.

Campbell, Pearl Posey. *Programmed Versus Conventional Instruction as Preparation for Laboratory Performance.* Doctor's Thesis. Ithaca, New York: Cornell University, 1969. 194 pp. **17, 22, 50**

Carpenter, Karen F. *Competencies Needed for Common Tasks in Three Home Related Occupations.* Master's Thesis. Ames: Iowa State University, 1968. 114 pp. **7, 8, 49**

Chadderdon, Hester and Fanslow, Alyce M. *Review and Synthesis of Research in Home Economics Education.* The Center for Research and Leadership Development in Vocational and Technical Education, The Ohio State University, Columbus, 1966. 118 pp. (ED 011 563 MF $0.50 HC $6.00) **20, 30, 43**

Christmann, Phyllis Alice. *Recognized Problems of Single Girls in Iowa Entering the Work World Following High School Graduation.* Master's Thesis. Ames: Iowa State University, 1967. 100 pp. (ED 026 482 MF $0.50 HC $5.10) **12, 13, 15**

Coleman, Mary E.; Priester, Jeanne; and Robertson, Fred R. *Five Year Report of Pilot Project Involving Young Homemakers in Low-Income Rural Areas in Alabama.* Cooperative Extension Service, Auburn University, Auburn, Alabama. 202 pp. **16, 50**

Cozine, June. *A Pilot Study for Gainful Employment in Home Economics. Volume III, A Suggested Curriculum Guide for Preparing Clothing Service Workers for Entry Level Jobs.* Project No. 6-1576, Grant No. OEG4-6-061576-1900, U.S. Office of Education, Bureau of Research, 1968. 159 pp. (ED 023 880 MF $0.75 HC $8.05) **6, 33, 50**

Cozine, June. *A Pilot Study for Gainful Employment in Home Economics. Volume I.* Project No. 6-1576, Grant No. OEG4-6-061576-1900, U.S. Office of Education, Bureau of Research, 1968. 41 pp. (ED 023 881 MF $0.25 HC $2.15) **6, 33, 49**

Cozine, June. *A Pilot Study for Gainful Employment in Home Economics. Volume II, A Suggested Curriculum Guide for Preparing Child Care Workers for Entry Level Jobs.* Project No. 6-1576, Grant No. OEG4-6-061576-1900, U.S. Office of Education, Bureau of Research, 1968. 92 pp. (ED 023 882 MF $0.50 HC $4.70) **6, 11**

Cozine, June. *A Pilot Study for Gainful Employment in Home Economics. Volume IV, A Suggested Curriculum Guide for Preparing Food Service Workers for Entry Level Jobs.* Project No. 6-1576, Grant No. OEG4-6-061576-1900, U.S. Office of Education, Bureau of Research, 1968. 95 pp. (ED 023 883 MF $0.50 HC $4.85) **6, 9**

Dalrymple, Julie I. "Concept Structuring of Home Economics Education Curriculum." *Journal of Home Economics* 57:431; 1965. **37, 48**

Dewar, Margaret A. *Problems Unique to Implementing Home Economics Occupational Education Courses at the Secondary Level.* University of Illinois, 1966. 70 pp. **6, 9, 49**

Dirks, Marie; Elliott, Cecile; Lowe, Phyllis K.; and Nelson, Helen Y. *The Special Contribution of the College Home Economics Education Supervisor to the Student Teaching Situation. Studies in Higher Education.* No. 94. Purdue University, 1967. 45 pp. (ED 016 865 MF $0.25 HC $2.35) **40, 48**

Dowell, Judy Holcombe. *Interest of Administrators, Counselors, Teachers, Parents, and Students in Courses in Gainful Employment in Home Economics.* Master's Thesis. Tallahassee: Florida State University, 1967. 144 pp. **13, 26, 49**

Drobish, Susan Kelly. *Analysis of a Rating Scale for Student Teachers in Home Economics.* Master's Thesis. Lafayette, Indiana: Purdue University, 1966. 149 pp. **33, 46**

East, Marjorie and Boleratz, Julia M. *An Experience with the Life and Work of the Disadvantaged for the Preservice Education of Home Economics Teachers.* Project No. 397, Contract No. 6-85-060, U.S. Office of Education, Bureau of Research, 1968. 118 pp. (ED 019 506 MF $0.50 HC $6.00) **31, 33, 50**

Ebert, Gladys M. *Suggestions for Homemaking Programs to Meet Needs of Educable Mentally Retarded Pupils.* Master's Thesis. Ames: Iowa State University, 1967. 243 pp. **13, 50**

Egan, Mary C. "To Serve is to Know." *Journal of Home Economics* 61:13-16; January 1969. **3**

Fetterman, Elsie. *The Development of a Work Orientation Program for Home Economics Related Occupations, 1964-1966.* Home Economics Education Service, Connecticut State Department of Education, 1966. 45 pp. (ED 011 286 MF $0.25 HC $2.35) **4, 49**

Flanagan, Catherine Patterson. *A Profile Study of Students Enrolled in Home Economics for Gainful Employment and in Home Economics for Homemaking.* Master's Thesis. Tallahassee: The Florida State University, 1968. 76 pp. **26, 49**

Follender, Alice I. *Anomie, Vocational Planfulness and Socioeconomic Status Among Urban Adolescents.* Master's Thesis. Ithaca, New York: Cornell University, 1967. 120 pp. **23, 49, 50**

Fults, Anna Carol and Zunick, Michael. "Money Management Practices of Teenagers from Low-Income Families." *Journal of Home Economics* 59:45-47; January 1967. **12, 15**

Garrett, Pauline G. *Interdisciplinary Approach to Preparing Home Economics Leaders for Emerging Programs Serving Disadvantaged Youth and Adults, Appendix B.* Project No. 6-1936, Grant No. OEG3-6-061936-0738, U.S. Office of Education, Bureau of Research, 1967. 108 pp. (ED 016 833 MF $0.50 HC $5.50) **37**

Garrett, Pauline G. *Interdisciplinary Approach to Preparing Home Economics Leaders for Emerging Programs Serving Disadvantaged Youth and Adults, Appendix C.* Project No. 6-1936, Grant No. OEG3-6-061936-0738, U.S. Office of Education, Bureau of Research, 1967. 173 pp. (ED 016 834 MF $0.75 HC $8.75) **37**

Gatlin, Sammie C. and Johnson, Mildred B. *A Study of Problems Recognized by Vocational Home Economics Teachers.* Research Series in Occupational Education—No. 9. North Carolina Research Coordinating Unit and School of Home Economics, University of North Carolina at Greensboro. (no date given). 41 pp. **11, 19**

Gerdes, Nancy J. *Teacher Perceptions of Preparation for Teaching Home Economics in Secondary Schools.* Master's Thesis. Ames: Iowa State University, 1968. **14, 30**

Gilbert, Ardyce L. *Clinical Evaluation of Predictive Data for Prospective Home Economics Teachers.* Master's Thesis. Ames: Iowa State University, 1966. 44 pp. (ED 026 454 MF $0.25 HC $2.30) **30, 50**

Gorman, Anna M. *An Instructional Program for Teachers of Occupational Training Programs Utilizing Home Economics Knowledge and Skill.* Project No. 6-1699, Grant No. OEG-2-6-061699-0731, U.S. Office of Education, Bureau of Research, 1966. 98 pp. **37**

Gould, Grovalynn Foreman. *Guidelines for Development and Use of Selected Types of Audiovisual Materials in Home Economics.* Doctor's Thesis. Stillwater: Oklahoma State University, 1968. 167 pp. (ED 024 829 MF $0.75 HC $8.45) **11, 19**

Gravatt, Arthur E. (ed.). *Conference on Home Economics Program Development for Disadvantaged Youth and Their Families.* Report of conference at the Pennsylvania State University, University Park. Grant No. OE-5-85-102. May 1966. 143 pp. (ED 010 069 MF $0.75 HC $7.25) **35**

Green, Mary Elizabeth. *Anomie and Socioeconomic Status Among Adolescents.* Doctor's Thesis. Ithaca, New York: Cornell University, 1968. 341 pp. **23, 49, 50**

Griffith, Sister Mary Evan. *A Study of the Small Home Economics Departments in the Catholic Liberal Arts Colleges in Relation to the American Home Economics Association's Proposals for Accreditation.* Doctor's Thesis. Columbus: The Ohio State University, 1966. 216 pp. **39**

Gritzmacher, Joan E. *Evaluation of Student Teaching in Home Economics.* Doctor's Thesis. Ithaca: Cornell University, 1967. 82 pp. (ED 016 860 MF $0.50 HC $4.20) **33, 46, 51**

Hill, Alberta. *Institute for Home Economics Teacher Educators on Preparing Teachers for Occupational Programs.* Project No. 70500, Grant No. OEG-3-7-070500-3049, U.S. Office of Education, Bureau of Research, 1967. 107 pp. (ED 022 918 MF $0.50 HC $5.45) **37**

Hollandsworth, Helen L. and Barbour, Henry O. *Preparing Teachers and Instructional Materials for the Food Service Occupations.* Project No. OE-6-85-022, U.S. Office of Education, Bureau of Research. East Lansing: College of Education, Michigan State University, 1966. 97 pp. (ED 010 370 MF $0.50 HC $4.95) **37**

Horn, Fern M. *Appraisal of Curriculum Materials Developed for Use by Secondary Home Economics Teachers.* OEG-6-068141-0958, University of Minnesota, Minneapolis, BR-6-8141. September 1966. 158 pp. (ED 010 440 MF $0.75 HC $8.00) **10, 11, 47, 51**

Howell, Kathleen M. *A Study of Ohio High School Home Economics Job Training Programs with Implications for Future Development.* Doctor's Thesis. Columbus: The Ohio State University, 1968. 112 pp. **13, 42, 49**

Hughes, Ruth P. *Measuring Relationships Among and Between Cognitive and Affective Behaviors in a Controlled Learning Situation, Vols. I and II.* Contract No. VEA-68-6-178, Bureau of Occupational Education Research, New York State Education Department, 1968. 491 pp. **9, 11, 13, 14, 18, 21, 26, 47, 49, 51**

Joern, Judith B. *National Survey of Wage Earning Home Economics Course Development.* Nebraska Research Coordinating Unit, Grant No. OEG-3-7-063032-1620, 1968. 19 pp. (ED 023 915 MF $0.25 HC $1.05) **6, 50**

Johnson, Lydia. *Sponsored Printed Educational Materials in Financial Security for Use in High School Home Economics Classes.* Doctor's Thesis. New York: Columbia University, 1965. 388 pp. **11, 18**

Johnson, Mildred; Lowe, Louise; and Wise, Barbara. *Summary of Pilot Study to Determine Criteria for Selection and Preparation of Teachers, Selection of Participants and Organization of High School Home Economics Programs with Occupational Emphasis.* Research Series in Occupational Education, No. 10. North Carolina Research Coordinating Unit and School of Home Economics, University of North Carolina at Greensboro, 1968. 77 pp. (ED 024 802 MF $0.50 HC $3.95) **11, 19, 26, 27**

Jung, Laura Ann H. *The Practices of the Chapter Adviser of Future Homemakers of America Organizations.* Master's Thesis. Tallahassee: Florida State University, 1966. 75 pp. **16**

Kister, Joanna Hunsinger. *Classroom Practices with Implications for Guidance in Planning Home Management Teaching Units.* Master's Thesis. Columbus: The Ohio State University, 1967. 76 pp. **14, 30**

Kreutz, Shirley and Anthony, Hazel. *Home Economics Education Objectives and Generalizations Related to Selected Concepts.* Contract No. OEG-3-6-062205-1929, U. S. Office of Education, Bureau of Research. (no date given). 24 pp. **48**

Lattes-Casseres, Virginia. *Teaching Home Management Through Simulation and Other Methods: An Experimental Study.* Doctor's Thesis. East Lansing: Michigan State University, 1968. 225 pp. **17, 22, 50**

Lee, Sylvia. *A National Leadership Seminar on Home Economics Education.* The Center for Vocational and Technical Education, The Ohio State University, Columbus, 1966. 118 pp. **34, 39, 49**

Lee, Sylvia, *et al. Implications of Women's Work Patterns for Vocational and Technical Education.* Research Series No. 19, Columbus: Center for Vocational and Technical Education, The Ohio State University, 1967. 80 pp. (ED 016 812 MF $0.50 HC $4.10) **24,49**

Lee, Sylvia. *Willingness of Home Economics Teachers to Teach Wage Earning Home Economics.* Doctor's Thesis. New York: Columbia University, 1966. 149 pp. **37, 49**

MacNeil, Sister Catherine. *A Comparative Study of Two Instructional Methods Employed in Teaching Nutrition: Lecture Discussion and Self-Directed Study.* Doctor's Thesis. Minneapolis: University of Minnesota, 1968. 255 pp. **20, 50**

Manning, Doris Elnova. *Viewpoints of Male Graduate Students with Respect to Their Wives Working at Different Stages of the Family Life Cycle.* Doctor's Thesis. Urbana: University of Illinois, 1967. 115 pp. **13, 25**

Mather, Mary E. *Home Economics Research Abstracts, 1966: Home Economics Education.* Washington, D.C.: American Home Economics Association, 1967. 92 pp. (ED 021 058 MF $0.50 HC $4.70) **51**

Mather, Mary E. *Home Economics Research Abstracts, 1967: Home Economics Education.* Washington, D.C.: American Home Economics Association, 1968. 66 pp. **51**

May, Marianne Bower. *Personality Characteristics of Secondary Home Economics Teachers of Homemaking and of Occupational Training.* Doctor's Thesis. Stillwater: Oklahoma State University, 1968. 69 pp. **35**

Meckley, Richard F.; Valentine, Ivan E.; and Conrad, M. J. *A Guide for Planning Facilities for Home Economics Occupational Preparation Programs.* Columbus: The Center for Vocational and Technical Education, The Ohio State University, 1969. 86 pp. (ED 022 924 MF $0.50 HC $4.40) **28**

Mehaffey, Barbara J. *Validity of the Taxonomy of Education Objectives: Cognitive Domain Tested in a Controlled Teaching Situation with Social Science Subject Matter.* Master's Thesis. Ithaca, New York: Cornell University, 1967. 95 pp. **21, 49, 50**

Miller, Nancy H. *Simulation Game: Evaluation of Effectiveness on Selected Cognitive and Affective Pupil Behaviors.* Master's Thesis. Ithaca, New York: Cornell University, 1969. 127 pp. **17, 22, 50**

Miranda, Gilbert E. *Report of a Follow-up Study Project of the Waitress and Food Handling Occupational Training Program.* Albuquerque, New Mexico, 1968. 10 pp. **13, 42, 49**

Monts, Elizabeth A. and Peterson, Bernadine H. "Graduate Teaching by Telephone and Radio." *Journal of Home Economics* 61:443-447; June 1969. **32, 50**

Moss, Jerome, Jr. *Review of Research in Vocational Technical Teacher Education.* Minneapolis: Minnesota Research Coordination Unit in Occupational Education, 1967. 42 pp. (ED 016 803 MF $0.25 HC $2.50) **51**

Murray, M. Eloise. *An Exploration of the Relationship of Self-Actualization to Teacher Success.* Master's Thesis. University Park: The Pennsylvania State University, 1966. 59 pp. **35, 49**

Murray, M. Eloise. *Self-Actualization and Social Values of Teachers as Related to Students' Perception of Teachers.* Doctor's Thesis. University Park: The Pennsylvania State University, 1968. 80 pp. **36, 49**

Nelson, Helen Y. and Goldman, Phyllis R. "Attitudes of High School Students and Young Adults Toward Gainful Employment of Married Women." *The Family Coordinator* 32:251-255; July 1969. **13, 25**

Nelson, Helen Y., *et al. Development of Programmed Instruction for Home Economics Education and Study of Attitudes Toward Its Use at the Undergraduate Level.* EIGHT UNITS OF PROGRAMMED INSTRUCTION. New York State College of Home Economics Research Report No. 6, 1966. 27 pp. **18, 22, 33**

Nelson, Helen Y. and Jacoby, Gertrude P. *Evaluation of Secondary School Programs to Prepare Students for Wage Earning in Occupations Related to Home Economics.* Grant No. 13012-5, Bureau of Occupational Education Research, New York State Department of Education. Ithaca: New York State College of Home Economics, Cornell University, 1968. 169 pp. (ED 019 492 MF $0.75 HC $8.55) **9, 28, 43, 46, 49, 50**

Nelson, Helen Y. and Jacoby, Gertrude P. *Evaluation of Secondary School Programs to Prepare Students for Wage Earning in Occupations Related to Home Economics.* Grant No. OE-5-85-110. Ithaca: New York State College of Home Economics, Cornell University, 1967. 184 pp. (ED 022 030 MF $0.75 HC $9.30) **9, 28, 43, 46, 49, 50**

Nelson, Helen Y. "Home Economics." In Robert L. Ebel (ed.), *Encyclopedia of Educational Research.* (Fourth Edition) New York: Mac Millan Co., 1969. pp. 607-619. **51**

New York State Department of Education. *A Study of Supply and Demand for New York Teachers of Home Economics, with Implications for Teacher Education.* Albany, 1965. 34 pp. (ED 010 772 MF $0.25 HC $1.80) **38**

O'Donnell, Beatrice. *Ten Michigan Communities Report on Educational Programs for Wage-Earning Occupations Related to Home Economics.* Professional Education Series H.E. 9, Home Economics Education. East Lansing: Michigan State University, 1967. 71 pp. **7, 9**

Ostler, Ruth-Ellen. *A Survey of Beliefs and Practices Relative to Teaching Home Economics in New York State.* Doctor's Thesis. Syracuse, New York: Syracuse University, 1967. **15, 29**

Phillips, A. LaVerne. *The Construction and Development of an Achievement Test in Home Economics Education.* Doctor's Thesis. University Park: The Pennsylvania State University, 1965. 148 pp. **46**

Ray, Elizabeth M. *An Experimental Attempt to Maximize the Professional Potential of Home Economics Teachers Through a Program of Group Counseling in College.* Project No. 403, Contract No. OE-6-85-039, U.S. Office of Education, Bureau of Research, 1968. 106 pp. (ED 021 782 MF $0.50 HC $5.40) **31, 50**

Reed, Dixie Lee. *Identification of the Functions and Activities of City Supervisors of Home Economics Education.* Master's Thesis. Ames: Iowa State University, 1968. 93 pp. **6, 41**

Ridley, Agnes F. *Gainful Employment in Home Economics, Phase I.* Contract No. RCU 67-1, State Department of Education, Tallahassee, Florida, 1967. 210 pp. **4, 7, 49, 51**

Robinson, George A. and Agan, R. J. *The Development and Demonstration of a Coordinated and Integrated Program of Occupational Information, Selection and Preparation in a Secondary School.* Contract No. OE-5-85-078, U.S. Office of Education, Bureau of Research, Interim Report, 1966, 55 pp. **7, 49, 50**

Robinson, Lillie McCray. *Determining Employment Needs, Education Feasibilities, and Potential Enrollments in Occupational Home Economics at the Post-Secondary Level in Oklahoma.* Doctor's Thesis. Stillwater: Oklahoma State University, 1968. 162 pp. (ED 026 503 MF $0.75 HC $8.20) **5, 13, 26, 49**

Rollings, James. *Evaluation of Effects of Exploratory Experience on the Vocational Maturity of Ninth Grade Boys and Girls.* Doctor's Thesis. Boulder: University of Colorado, 1968. 155 pp. **13, 26, 27, 49**

Scruggs, Marguerite and Souder, Mary Fern. *Interrelationship of Home Environment and Employment.* Project No. 3, Contract No. OE-5-85-108. Ames: Iowa State University of Science and Technology, 1966. 64 pp. (ED 016 766 MF $0.50 HC $3.30) **11, 49, 50**

Shipley, A. Frances. *Analysis of Three Home Related Occupations.* Master's Thesis. Ames: Iowa State University, 1967. 102 pp. (ED 026 484 MF $0.50 HC $5.20) **7, 8, 49**

Shootes, Queen Ester. *Gainful Employment of Negro Home Economics Graduates With Implications for Education Programs.* Doctor's Thesis. Madison: University of Wisconsin, 1965. **39**

Simpson, Elizabeth J. "Challenges in Curriculum Development in Home Economics." *Journal of Home Economics* 60:767-773; December 1968. **3**

Simpson, Elizabeth J. *The Classification of Educational Objectives, Psychomotor Domain.* School of Education, University of Illinois, 1966. 45 pp. (ED 010 368 MF $0.25 HC $2.35) **9**

Smalley, Florine M. *Availability of Information to Pupils in Iowa High Schools Concerning Home Economics Related Occupations.* Master's Thesis. Ames: Iowa State University, 1968. 74 pp. **26, 27, 49**

Smith, Miriam L. H. *The Facilitation of Student Self-Directed Learning as Perceived by Teachers with High and Low Levels of Self-Actualization and Dogmatism.* Doctor's Thesis. University Park: The Pennsylvania State University, 1968. 128 pp. **37, 49**

Snell, Ednell. *Selection Practices for Home Economics Education Majors.* Doctor's thesis. New York: Columbia University, 1966. 185 pp. **28**

Souder, Mary Vanpool. *Exploratory Study of Relationships Between Selected Aspects of Home Environment and Employment Criteria of the Husband.* Doctor's Thesis. Ames: Iowa State University, 1967. 246 pp. **12**

Story, Marilyn Welshimer. *Some Attitudes that Indicate Job Satisfaction in Vocational Home Economics Teachers Graduated from Two Different Curriculums at Michigan State University.* Doctor's Thesis. East Lansing: Michigan State University, 1967. 228 pp. **15**

Sulek, Helen. *Child Development Training Program for Vocational Home Economics Teachers.* Project No. 6-2186, Grant No. OEG-3-6-062186-0730. Lincoln: University of Nebraska, 1967. 119 pp. (ED 016 066 MF $0.50 HC $6.05) **37, 49**

Swope, Mary Ruth. *Facts About Personnel in Home Economics in Institutions of Higher Education: A National Survey.* Charleston: Eastern Illinois University, School of Home Economics, 1967. 68 pp. **15**

Thomas, Alice M. *Levels of Cognitive Behavior Measured in a Controlled Teaching Situation.* Master's Thesis. Ithaca, New York: Cornell University, 1965. 167 pp. **20, 49**

Walton, Barbara J. *Final Report and Evaluation of the Women's Talent Corps New Careers Program.* 201 Varick Street, New York City: Women's Talent Corps, 1968. 57 pp. **16, 44, 50**

Wilhelm, Winifred P. *Self-Actualization of Teachers and Students as Factors in Teaching Effectiveness.* Master's Thesis. University Park: The Pennesylvania State University, 1968. 58 pp. **36, 49**

Williams, Rosemary Wood. *Role of the Home Economics College Supervisor of Student Teachers.* Doctor's Thesis. Columbus: The Ohio State University, 1966. 200 pp. **40**

Zavacki, Ann E. *Validating the Cumulative Hypothesis of the First Three Levels in the Taxonomy of Educational Objectives: Cognitive Domain.* Master's Thesis. Ithaca, New York: Cornell University, 1968. 167 pp. **21, 49, 50**